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City of Alexandria, Virginia

MEMORANDUM TO INDUSTRY NO. 02-09

DATE: DECEMBER 3, 2009

TO: HOMEOWNERS, CONTRACTORS, DEVELOPERS AND DESIGN PROFESSIONALS

FROM: EMILY A. BAKER, P.E., CITY ENGINEER 
TRANSPORTATION & ENVIRONMENTAL SERVICES

SUBJECT: DESIGN GUIDELINES FOR SITE PLAN PREPARATION.
AMENDED STANDARD DETAILS, REQUIREMENTS, AND CITY
STANDARD NOTES.

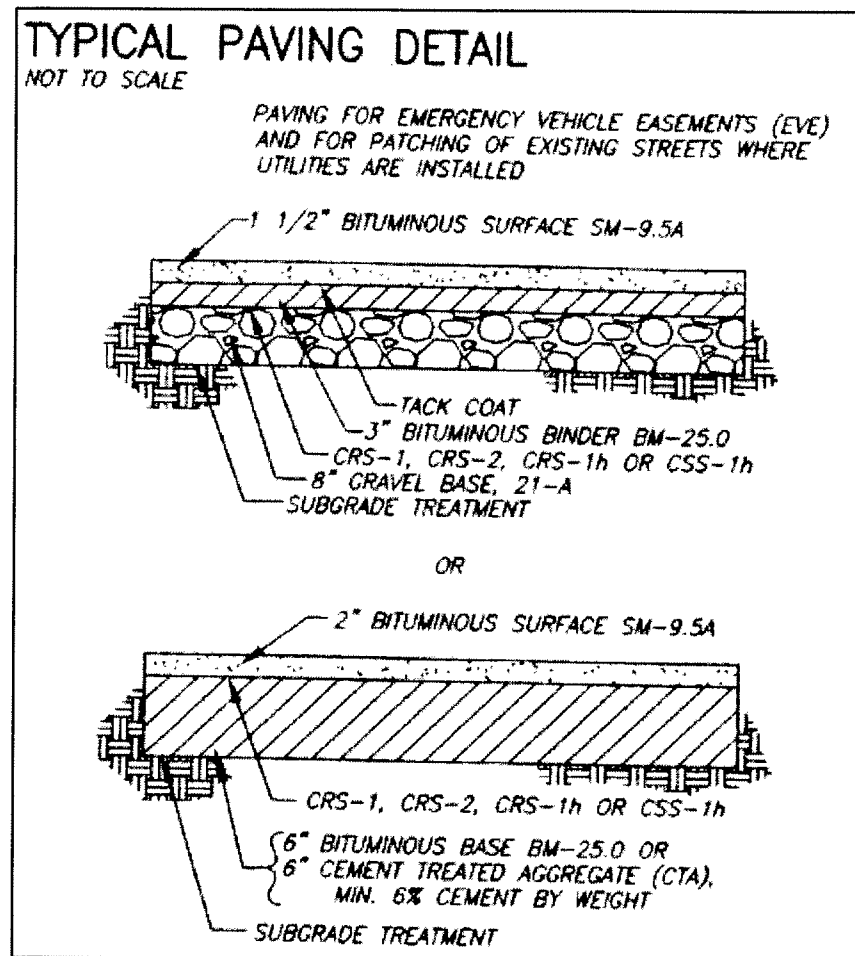
In order to facilitate the preparation and review of construction drawings, the Department of Transportation and Environmental Services (T&ES) in coordination with the Departments of Planning and Zoning (P&Z), Recreation, Parks & Cultural Activities (RP&CA), Building and Fire Code Administration, General Services, Police, Health, Historic Alexandria, and Housing has prepared the attached City Standard Notes keeping in view the following objectives:

1. To provide design guidance to the submitting engineer / surveyor for preparation of Development Site Plans (DSP) per the City of Alexandria requirements, standards, and practices.
2. To provide information to assist the City of Alexandria plan reviewers.
3. To provide direction to the Contractor.
4. To provide direction for implementation of future conditions in cases of changes in the ownership or circumstances.

The submitting design engineers and/or surveyors shall amend these notes, as applicable, or add additional site specific notes to a particular Site Plan. Most of the notes/design guidelines provided are based on the City of Alexandria requirements, standards, and practices. These notes are not meant to be exhaustive and additional notes, as required, shall be provided by the submitting designer. In addition to the attached City Standard Notes, the following requirements are now in effect:

1. Due to maintenance requirements, the acceptable specification for PVC pipe has been changed from SDR 35 to SDR 26 with an option of using Schedule 40.
2. The detail of typical 'Asphalt Paving for Emergency Vehicle Lanes', CSAP-1A is amended as shown below to conform the material specifications to Virginia Department of Transportation (VDOT). However, the pavement section shall be designed by a licensed

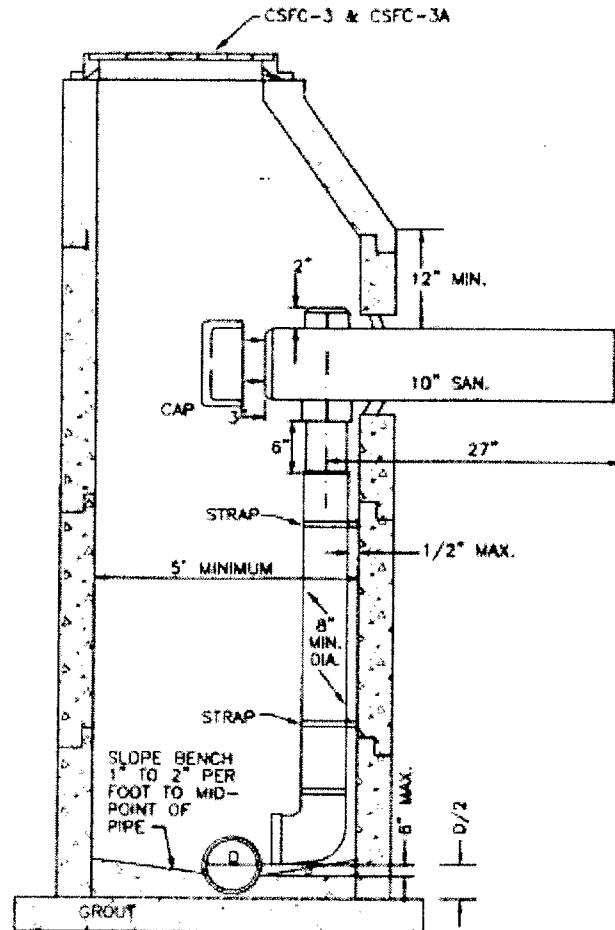
geotechnical / professional engineer to the satisfaction of Director, Transportation and Environmental Services for all pavements including Emergency Vehicle Easements (EVE). The design for supporting H-20 loading shall use the California Bearing Ratio (CBR) Values of in-situ materials that must be determined by field and/or laboratory tests for actual design of required thicknesses of surface, base, sub-base, and sub grade materials.



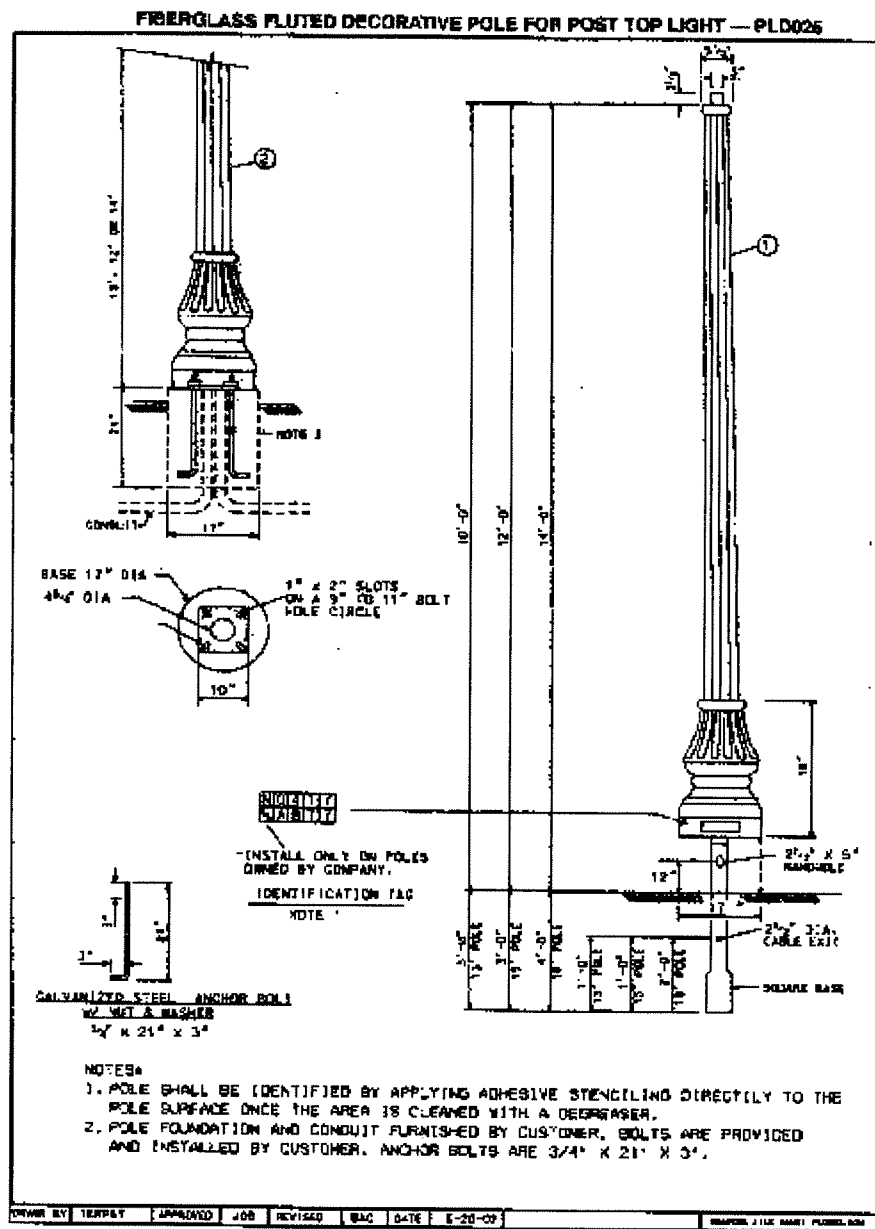
The gravel base, 21-B as an alternate to 21-A, can be provided with under drain.

3. The standard detail of an inside Drop Manhole will be as following:

INSIDE DROP MANHOLE DETAIL



4. The standard detail for a fiberglass fluted decorative pole shall conform to the current Dominion Virginia Power (DVP) detail, currently provided as:*



Electric Distribution
Overhead Construction Manual

Page
6 January 2007 Doc

[*The design engineer is advised to contact Dominion Virginia Power to obtain the latest detail of the pole.]

5. The Runoff Coefficient Values, C, for use in the Rational Formula for Low Impact Developments (LID) will be as follows:
 - a. Porous Pavers, Porous Concrete, and Porous Asphalt (with under drains) = 0.7
 - b. Green Roof = 0.7
 - c. Rubberized Playground Surfaces (with gravel base and under drains) = 0.6

The office of Environmental Quality (OEQ), Department of Transportation and Environmental Services (T&ES) will consider the Porous Pavers /Porous Asphalt, Green Roof, and Rubberized Playground Surfaces as pervious and will grant credit towards phosphorous removal requirements. The Division of Engineering and Design will grant credit towards detention requirements for the amount of water retained in the pore space volume/voids of green roofs.

6. All Cut Sheets must be submitted to the Construction & Inspection (C&I) Division prior to commencement of construction of improvements (streets, curbs, gutters, storm sewers, sanitary sewers, etc.). The cut sheets must bear the statement, "Certified to be in accordance with the approved Final Site Plan and approved changes," and be sealed and signed by a Professional Engineer and/or Land Surveyor B registered in the Commonwealth of Virginia. For similar private improvements, cut sheets must be certified, signed, and sealed by a licensed professional as described above and a copy must be delivered to the C&I Site Inspector by developer/contractor/engineer prior to commencement of construction.
7. All new installations and/or reinstallations of utilities such as electrical lines, gas pipes, communication cables including water and sewer laterals both on private property and in the public right of way in the City of Alexandria shall be provided with 3" and 6" wide 5 mil overall thickness Detectable Underground Warning Tapes (DUWT). The 3" DUWT shall be installed at depths of 12" to 18" and 6" wide at a depth of 24" so as to make underground installations easy to find using a non-ferrous locator. The DUWT shall be with aluminum backing or solid aluminum core laminated with a protective clear film on both sides, sealing and protecting the graphics from underground moisture, acids, alkalis, and other soil substances. All DUWT tapes shall be printed in black ink on American Public Works Association (APWA) approved colors to meet or exceed industry standards. The following are the APWA Color Codes:

Color	Codes
Red	Caution Buried Electric Power Lines, Cables, Conduits, and Lighting Cables
Yellow	Caution Gas, Oil, Steam, Petroleum, or Gaseous Materials
Orange	Caution Communications, Alarm or Signal Lines, Cables, or Conduits
Blue	Caution Potable Water
Purple	Caution Reclaimed Water, Irrigation and Slurry Lines
Green	Caution Sewer, Drain Lines, and Force Main

If you have any questions or require additional information, please contact Dr. S.P. Singh, P.E. at 703-746-4062.

Attachment: Design Guidelines for Site Plan Preparation and City Standard Notes.

ATTACHMENTS

DESIGN GUIDELINES FOR SITE PLAN PREPARATION AND CITY STANDARD NOTES.

[Important Notice: The following City Standard Notes SHALL be amended by the submitting designer, as applicable to the Development Site Plan]

PROJECT NARRATIVE

(Provide narrative description of the project. Include the details of public infrastructure and public and private utilities that serve the site.)

EXISTING CONDITIONS SURVEY NOTES

1. HORIZONTAL DATUM* NORTH AMERICAN DATUM OF 1983, NAD83 -----
VERTICAL DATUM* NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88* -----
2. UTILITY INFORMATION, AS SHOWN ON THIS PLAN, IS TAKEN FROM THE RECORDS AND/OR FIELD SURVEY COMPLETED BY XXXXXXXX, DATED MM/YYYY; AND CANNOT BE GAURANTEED. FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY "MISS UTILITY" AT 1-800-257-7777 AND 811 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION. THE CONSTRUCTION WORKERS AND CONTRACTOR(S) ARE ENCOURAGED TO VISIT DOMINION VIRGINIA POWER WEB SITE AT www.dom.com (KEYWORD SAFETY) FOR ADDITIONAL SAFETY INSTRUCTIONS.
3. LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR/ENGINEER SHOULD DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS TO VERIFY EXACT LOCATION.
4. THE BOUNDARY INFORMATION FOR THE SUBJECT SITE IS BASED ON A CURRENT FIELD SURVEY PREPARED BY XXXXXXXX. DATED MM/YYYY IN ACCORDANCE WITH THE REQUIREMENTS OF VIRGINIA ASSOCIATION OF LAND SUVEYORS.

* PER MEMORANDUM TO INDUSTRY, JULY 20, 2005; THE PLAN SHALL BE PREPARED USING VIRGINIA STATE PLANE (NORTH ZONE) COORDINATES BASED ON NAD83 AND NAVD88; HOWEVER, IF THE CURRENT DRAWINGS ARE PREPARED USING NORTH AMERICAN DATUM OF 1927 (NAD27) AND NORTH GEODETIC VERTICAL DATUM OF 1929 (NGVD29) THEN THE AS-BUILT DRAWINGS SHALL PROVIDE A CONVERSION TABLE OF SANITARY AND STORM SEWER DATA IN THE NAD83 AND NAVD88 DATUMS.

DESIGN GUIDELINES FOR SITE PLAN PREPARATION

(The following notes/design guidelines are provided to help the submitting engineer / surveyor to prepare the plan per the City of Alexandria requirements, standards, and practices. The submitting engineer/surveyor shall determine which notes are to be included on the site plan. This list is not meant to be exhaustive and additional notes, as required, shall be provided by the submitting engineer/surveyor.)

1. SINCE THE RECORD DRAWINGS, MAPS, AND OTHER DOCUMENTS OF THE CITY OF ALEXANDRIA, STATE, AND FEDERAL AGENCIES SHOW THE TRUE NORTH POINTING UPWARDS, THEREFORE, THE SITE PLAN SHALL SHOW THE TRUE NORTH ARROW POINTING UPWARD AS IS CUSTOMARY; HOWEVER, FOR THE SAKE OF PUTTING THE PLAN TOGETHER AND/OR EASE OF UNDERSTANDING, THE PROJECT NORTH ARROW POINTING UPWARD, PREFERABLY EAST, OR WEST MAY BE SHOWN PROVIDED IT IS CONSISTENTLY SHOWN IN THE SAME DIRECTION ON ALL THE SHEETS WITH NO EXCEPTION AT ALL. THE NORTH ARROW SHALL SHOW THE SOURCE OF MERIDIAN. THE PROJECT NORTH ARROW POINTING DOWNWARD WILL NOT BE ACCEPTABLE EVEN IF, IT IS SHOWN CONSISTENTLY ON ALL THE SHEETS.
2. THE PLAN SHALL SHOW ALL THE EXISTING UTILITY CONNECTIONS AND LAYOUT IN PLAN VIEW AND ALL THE PROPOSED CONNECTIONS AND LAYOUT IN PLAN AND PROFILE.
3. THE PLAN SHALL SHOW SANITARY AND STORM SEWER, AND WATER LINE IN PLAN AND PROFILE IN THE FIRST FINAL SUBMISSION AND CROSS REFERENCE THE SHEETS ON WHICH THE PLAN AND PROFILE IS SHOWN, IF PLAN AND PROFILE IS NOT SHOWN ON THE SAME SHEET. CLEARLY LABEL THE SANITARY AND STORM SEWER, OR WATER LINE IN PLANS AND PROFILES. PROVIDE EXISTING AND PROPOSED GRADE ELEVATIONS ALONG WITH THE RIM AND INVERT ELEVATIONS OF ALL THE EXISTING AND PROPOSED SANITARY AND STORM SEWER AT MANHOLES, AND WATER LINE PIPING AT GATE WELLS ON THE RESPECTIVE PROFILES. USE DISTINCTIVE STATIONING FOR VARIOUS SANITARY AND STORM SEWERS (IF APPLICABLE OR REQUIRED BY THE PLAN), AND WATER LINE IN PLAN AND USE THE CORRESPONDING STATIONING IN RESPECTIVE PROFILES.
4. ALL CONSTRUCTION INFORMATION (I.E., INVERTS, PIPE SIZE, PIPE CLASS, LENGTH AND SLOPE) SHALL BE SHOWN ON PROFILE AND PIPE SIZE, CLASS, LENGTH AND DIRECTION OF FLOW FOR SANITARY AND STORM SEWERS SHALL BE SHOWN IN PLAN VIEW.
5. THE APPLICANT SHALL COMPLY WITH THE CHESAPEAKE BAY PRESERVATION ACT IN ACCORDANCE WITH ARTICLE XIII OF THE CITY'S ZONING ORDINANCE, WHICH INCLUDE THE REQUIREMENTS FOR STORMWATER POLLUTANT LOAD REDUCTIONS, TREATMENT OF WATER QUALITY VOLUME DEFAULT, AND STORMWATER QUANTITY MANAGEMENT ACCORDING TO ALEXANDRIA SUPPLEMENT TO THE NORTHERN VIRGINIA BMP HANDBOOK.

6. ALL SANITARY SEWERS SHALL BE CONSTRUCTED TO THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS. MINIMUM DIAMETER OF SANITARY SEWERS SHALL BE 10" IN THE PUBLIC RIGHT-OF-WAY AND SANITARY LATERAL 6" FOR ALL COMMERCIAL AND INSTITUTIONAL DEVELOPMENTS; HOWEVER, A 4" SANITARY LATERAL WILL BE ACCEPTABLE FOR SINGLE FAMILY RESIDENCES. THE ACCEPTABLE PIPE MATERIALS WILL BE POLYVINYL CHLORIDE (PVC) ASTM D-3034-77 SDR 26, ASTM 1785-76 SCHEDULE 40, DUCTILE IRON PIPE AWWA C-151 (ANSI A21.51) CLASS 52, OR REINFORCED CONCRETE PIPE ASTM C-76 CL IV (FOR 12" OR LARGER DIAMETERS). CL III MAY BE ACCEPTABLE ON PRIVATE PROPERTIES. THE ACCEPTABLE MINIMUM AND MAXIMUM VELOCITIES WILL BE 2.5 FPS AND 10 FPS, RESPECTIVELY. LATERALS SHALL BE CONNECTED TO THE SANITARY SEWER THROUGH A MANUFACTURED "Y" OR "T" OR APPROVED SEWER SADDLE. WHERE THE LATERALS ARE BEING CONNECTED TO EXISTING TERRACOTA PIPES, REPLACE THE SECTION OF MAIN AND PROVIDE MANUFACTURED "Y" OR "T", OR ELSE INSTALL A MANHOLE.
7. ALL STORM SEWERS SHALL BE CONSTRUCTED TO THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS. MINIMUM DIAMETER OF STORM SEWERS SHALL BE 18" IN THE PUBLIC RIGHT-OF-WAY AND MINIMUM SIZE STORM SEWER CATCH BASIN LEAD IS 15". THE ACCEPTABLE PIPE MATERIALS WILL BE AWWA C-151 (ANSI A21.51) CLASS 52 OR REINFORCED CONCRETE PIPE ASTM C-76 CL IV. FOR ROOF DRAINAGE SYSTEM, POLYVINYL CHLORIDE (PVC) ASTM D-3034-77 SDR 26 AND ASTM 1785-76 SCHEDULE 40 PIPES WILL BE ACCEPTABLE. THE ACCEPTABLE MINIMUM AND MAXIMUM VELOCITIES WILL BE 2.0 FPS AND 15 FPS, RESPECTIVELY.
8. LATERAL SEPARATION OF SEWERS AND WATER MAINS: A HORIZONTAL SEPARATION OF 10' (EDGE TO EDGE) SHALL BE PROVIDED BETWEEN A STORM OR SANITARY SEWER AND A WATER LINE; HOWEVER, IF THIS HORIZONTAL SEPARATION CANNOT BE ACHIEVED THEN THE SEWER AND WATER MAIN SHALL BE INSTALLED IN SEPARATE TRENCHES AND THE BOTTOM OF THE WATER MAIN SHALL BE AT LEAST 18" ABOVE OF THE TOP OF THE SANITARY / STORM SEWER. IF BOTH THE HORIZONTAL AND VERTICAL SEPARATIONS CANNOT BE ACHIEVED THEN THE SEWER PIPE MATERIAL SHALL BE DUCTILE IRON PIPE (DIP) AWWA C-151 (ANSI A21.51) CLASS 52 AND PRESSURE TESTED IN PLACE WITHOUT LEAKAGE PRIOR TO INSTALLATION.

CROSSING WATER MAIN OVER AND UNDER A SANITARY OR STORM SEWER: WHEN A WATER MAIN OVER CROSSES OR UNDER CROSSES A SANITARY / STORM SEWER THEN THE VERTICAL SEPARATION BETWEEN THE BOTTOM OF ONE (I.E., SANITARY / STORM SEWER OR WATER MAIN) TO THE TOP OF THE OTHER (WATER MAIN OR SANITARY/ STORM SEWER) SHALL BE AT LEAST 18" FOR SANITARY SEWER AND 12" FOR STORM SEWER; HOWEVER, IF THIS CANNOT BE ACHIEVED THEN BOTH THE WATER MAIN AND SANITARY / STORM SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE (DIP) AWWA C-151 (ANSI A21.51) CLASS 52 WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF

CROSSING AND THE PIPES SHALL BE PRESSURE TESTED IN PLACE WITHOUT LEAKAGE PRIOR TO INSTALLATION. SANITARY SEWERS UNDER CREEKS AND STORM SEWER PIPE CROSSINGS WITH LESS THAN 6" CLEARANCE SHALL BE ENCASED IN CONCRETE.

NO WATER MAIN PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF SANITARY / STORM SEWER MANHOLE. MANHOLES SHALL BE PLACED AT LEAST 10 FEET HORIZONTALLY FROM THE WATER MAIN WHENEVER POSSIBLE. WHEN LOCAL CONDITIONS PROHIBIT THIS HORIZONTAL SEPARATION, THE MANHOLE SHALL BE WATERTIGHT CONSTRUCTION AND TESTED IN PLACE.

CROSSING EXISTING OR PROPOSED UTILITIES: UNDERGROUND TELEPHONE, CABLE T.V., GAS, AND ELECTRICAL DUCT BANKS SHALL BE CROSSED MAINTAINING A MINIMUM OF 12" OF SEPARATION OR CLEARANCE WITH WATER MAIN, SANITARY, OR STORM SEWERS. IF THIS SEPARATION CANNOT BE ACHIEVED THEN THE SEWER PIPE MATERIAL SHALL BE DUCTILE IRON PIPE (DIP) AWWA C-151 (ANSI A21.51) CLASS 52 FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING AND PRESSURE TESTED IN PLACE WITHOUT LEAKAGE PRIOR TO INSTALLATION. SANITARY / STORM SEWERS AND WATER MAIN CROSSING OVER THE UTILITIES SHALL HAVE ADEQUATE STRUCTURAL SUPPORT (PIER SUPPORT AND/OR CONCRETE ENCASEMENT) TO PREVENT DAMAGE TO THE UTILITIES.

9. RIP RAP SHALL BE DESIGNED AS PER THE REQUIREMENTS OF VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.
10. DIMENSIONS OF PARKING SPACES, AISLE WIDTHS, ETC. WITHIN THE PARKING GARAGE SHALL BE PROVIDED ON THE PLAN. NOTE THAT THE DIMENSIONS SHALL EXCLUDE COLUMN WIDTHS. THE WIDTHS OF THE COLUMNS SHALL BE SHOWN TO THE SCALE ON THE PLAN.
11. DISCHARGE FROM SWIMMING POOLS MUST BE CONNECTED TO THE SANITARY SEWER.
12. A SEPARATE GEOTECHNICAL AND HYDROGEOLOGICAL INVESTIGATION REPORT SHALL BE SUBMITTED TO FIRE AND CODE ADMINISTRATION AND TRANSPORTATION AND ENVIRONMENTAL SERVICES INCLUDING RECOMMENDATIONS FROM A GEOTECHNICAL PROFESSIONAL FOR PROPOSED CUT SLOPES AND EMBANKMENTS, IF DEEMED NECESSARY BY THE DEPARTMENT.
13. SHOW THE DRAINAGE DIVIDE AREAS ON THE GRADING PLAN OR ON A SHEET SHOWING REASONABLE INFORMATION ON TOPOGRAPHY ALONG WITH THE STRUCTURES WHERE EACH SUB-AREA DRAINS.
14. PROVIDE PROPOSED ELEVATIONS (CONTOURS AND SPOT SHOTS) IN SUFFICIENT DETAILS ON GRADING PLAN TO CLEARLY SHOW THE DRAINAGE PATTERNS.

15. PER THE REQUIREMENTS OF TITLE 5: TRANSPORTATION AND ENVIRONMENTAL SERVICES, CHAPTER 3, SECTION 5-3-2 AND SECTION 5-3-3; CUSTOMER UTILITY SERVICES AND TRANSMISSION, DISTRIBUTION AND MAIN LINES, RESPECTIVELY SHALL BE PLACED UNDERGROUND UNLESS OTHERWISE SPECIFICALLY EXEMPTED.
16. THE SUBMITTING ENGINEER OR CONTRACTOR SHALL PROVIDE CUT SHEETS TO THE CHIEF, DIVISION OF CONSTRUCTION AND INSPECTION (C&I), DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES PRIOR TO CONSTRUCTION.
17. IF THESE NOTES AND THE CITY OF ALEXANDRIA DESIGN STANDARDS AND SPECIFICATIONS DO NOT COVER ANY DESIGN ASPECTS OF THE PROJECT THEN THE IMPROVEMENTS WILL BE DESIGNED PER THE STANDARDS AND SPECIFICATIONS OF VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT), VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH), AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), MANUAL OF TRAFFIC CONTROL DEVICES (MUTCD), VIRGINIA WORK AREA PROTECTION MANUAL (VWAPM), RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES (TEN STATE STANDARDS), AND ANY OTHER STANDARDS APPROVED BY THE DIRECTORS OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, PLANNING AND ZONING, FIRE AND CODE ADMINISTRATION, AND RECREATION, PARKS & CULTURAL ACTIVITIES. THE PLAN SHALL PROVIDE APPROPRIATE REFERENCE AND INCLUDE THE SOURCE OF THE INFORMATION AND/OR STANDARDS USED IN DEVELOPING THE PLAN.

CITY STANDARD GENERAL NOTES

1. THE SUBJECT SITE IS LOCATED ON CITY OF ALEXANDRIA ASSESSMENT MAP NO. XXXXXX, PARCELS XX, XX AND XX AND IS ZONED XX AND XX.
2. OWNER: XXXXXXXXXX.
3. DEED BOOK XXXX PAGE XX
4. ADDRESS
5. AREA TABULATION (Total site area, construction, disturbed, impervious, etc.) (Show areas in acres and square feet).
6. THE NATURAL SOILS AT THE SITE CONSIST OF..... (Provide the source of information i.e., City Soil Map or geotechnical investigation performed by (The City Soil map is available on page 21 at the City's web site address: http://alexandriava.gov/uploadedFiles/tes/info/Alexandria_Water_Quality_Master_Plan.pdf)
7. THE SITE IS LOCATED IN THE WATERSHED. (The City's watershed map can be obtained from the Department of Transportation and Environmental Services, Office of Environmental Quality (OEQ) or Engineering and Design Division.)
8. CONSTRUCTION PERMITS ARE REQUIRED FOR THIS PROJECT. THE APPROVED SITE PLAN MUST BE ATTACHED TO THE PERMIT APPLICATION THAT FULLY DETAILS THE CONSTRUCTION AS WELL AS LAYOUTS AND SCHEMATICS OF THE MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS.
9. ALL PUBLIC AND PRIVATE EASEMENTS OR ALL KNOWN PUBLIC AND PRIVATE EASEMENTS, INCLUDING ALL UTILITY, EGRESS, AND CONSERVATION RESTRICTIONS ARE SHOWN. THE APPLICANT SHALL NOT CONSTRUCT ANY PERMANENT STRUCTURES OVER ANY EXISTING OR PROPOSED PUBLIC AND/OR PRIVATE EASEMENTS UNLESS OTHERWISE APPROVED BY THE PLANNING COMMISSION AND CITY OF ALEXANDRIA COUNCIL.
10. PLAT SUBJECT TO RESTRICTIONS OF RECORD.
11. BUILDING HEIGHT SHALL NOT EXCEED THE ALLOWABLE LIMIT BY CITY OF ALEXANDRIA ZONING ORDINANCE OR AS APPROVED BY THE PLANNING COMMISSION AND CITY OF ALEXANDRIA COUNCIL.
12. ALL NEW CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA AND TO THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (USBC).

13. FLOOR AREA CALCULATIONS WITH ALLOWABLE LIMITS, AS APPROVED BY PLANNING COMMISSION AND CITY COUNCIL, ARE DEMONSTRATED HEREIN.
14. PRIOR TO COMMENCING NEW WORK, THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING ADJACENT AREAS. IF CITY'S EXISTING PUBLIC INFRASTRUCTURE, INCLUDING BUT NOT LIMITED, TO STREETS, ALLEYWAYS, DRIVEWAY APRONS, SANITARY AND STORM SEWERS, STREET LIGHTING, TRAFFIC AND PEDESTRIAN SIGNALS, SIDEWALKS, CURB AND GUTTER, AND STORM WATER DROP INLET STRUCTURES ARE DAMAGED BY THE CONTRACTOR OR BY ACTIVITIES RELATING TO THE SITE CONSTRUCTION THEN THE APPLICANT SHALL REPAIR THE SAME TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES). A PRE-CONSTRUCTION WALK/SURVEY OF THE SITE SHALL OCCUR WITH CONSTRUCTION AND INSPECTION STAFF TO DOCUMENT EXISTING CONDITIONS PRIOR TO ANY LAND DISTURBING ACTIVITY.
15. ALL IMPROVEMENTS TO THE CITY'S RIGHT-OF-WAY SUCH AS CURB, GUTTER, SIDEWALK, AND DRIVEWAY APRONS, ETC., ARE DESIGNED PER THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS.
16. ALL STREET CUT AND PATCH WORK LOCATED IN PUBLIC RIGHT-OF-WAYS, REQUIRED FOR ANY UTILITY INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS AND TO THE SATISFACTION OF THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES).
17. CONTRACTOR MUST ENSURE THAT THERE IS NO DISTURBANCE ON ADJACENT PROPERTIES WITHOUT RECORDED EASEMENT OR NOTARIZED LETTER OF PERMISSION FROM THE ADJACENT PROPERTY OWNERS.
18. ALL REQUIRED STATE AND FEDERAL PERMITS, WHICH COULD INCLUDE PERMITS FROM THE VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION (VDNR), VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VDEQ), VIRGINIA DEPARTMENT OF HISTORIC RESOURCES (VDHR), UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA), ARMY CORPS OF ENGINEERS AND VIRGINIA MARINE RESOURCES, MUST BE IN PLACE FOR ALL PROJECT CONSTRUCTION AND MITIGATION WORK PRIOR TO RELEASE OF THE FINAL SITE PLAN. THIS INCLUDES THE STATE REQUIREMENT FOR A VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES FOR LAND DISTURBING ACTIVITIES GREATER THAN 2,500. INFORMATION REGARDING THE VSMP GENERAL PERMIT CAN BE FOUND ONLINE AT: http://www.dcr.virginia.gov/soil_and_water/vsmp.shtml.
19. PERMITS FROM THE CITY OF ALEXANDRIA OFFICE OF ENVIRONMENTAL QUALITY (OEQ), TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES), AND BUILDING AND FIRE

CODE ADMINISTRATION SHALL BE OBTAINED BY THE APPLICANT, AS REQUIRED AND DOCUMENTED HEREIN. THE CONTRACTOR CAN CONTACT ALEXANDRIA FIRE AND CODE ADMINISTRATION DEPARTMENT AT (703) 838-4644 OR (703) 746-4200 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.

20. ANY WORK IN THE PUBLIC RIGHT OF WAY SHALL REQUIRE A SEPARATE PERMIT FROM THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES. THE CONTRACTOR CAN CONTACT THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES AT (703) 746-4035 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.
21. THE PROPERTY ADDRESS MUST BE CLEARLY MARKED IN THE FRONT AND BACK OF THE PROPOSED DEVELOPMENT SITE DURING CONSTRUCTION FOR EMERGENCY RESPONSE PURPOSE IN CONTRASTING COLORS FOR EASY IDENTIFICATION.
22. THE APPLICANT SHALL CONTACT THE CRIME PREVENTION UNIT OF THE ALEXANDRIA POLICE DEPARTMENT AT 703-838-4520 REGARDING SECURITY HARDWARE FOR NEW CONSTRUCTION. THIS SHALL BE COMPLETED PRIOR TO ISSUANCE OF BUILDING PERMIT.
23. ROOF DRAINAGE SYSTEM, SUMP PUMP DISCHARGE, AND FOUNDATION DRAIN SYSTEM MUST BE INSTALLED SO AS NEITHER TO ADVERSELY IMPACT UPON, NOR CAUSE EROSION DAMAGE TO ADJACENT PROPERTIES OR THE PUBLIC RIGHT OF WAY.
24. THE CONTRACTOR MUST ENSURE THAT POSITIVE DRAINAGE OCCURS ON SITE TO PREVENT PONDING OR DRAINAGE PROBLEMS ON ADJACENT PROPERTIES.
25. IN THE EVENT, THE PROPOSED ROOF DRAINAGE AND/OR SUMP PUMP DISCHARGE, AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING ADVERSELY IMPACTS AND/OR CREATES A NUISANCE ON PUBLIC RIGHT OF WAY OR PRIVATE PROPERTIES THEN THE APPLICANT SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL IMPROVEMENTS TO THE ROOF DRAINAGE AND/OR SUMP PUMP DISCHARGE AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES.
26. PER THE REQUIREMENTS OF SECTION 8-1-12 OF THE CITY CHARTER AND CODE; WHEN THE BUILDING FOOTING HAS BEEN PLACED AND THE WALLS HAVE BEEN RAISED TO THE FIRST JOIST BEARING OR STORY HEIGHT ABOVE GRADE, A PLOT PLAN SHOWING THE EXACT LOCATION OF THE WALLS SHALL BE PREPARED BY A LICENSED, CERTIFIED PUBLIC LAND SURVEYOR OR PROFESSIONAL ENGINEER AND FILED WITH THE BUILDING OFFICIAL FOR APPROVAL BEFORE PROCEEDING FURTHER WITH THE CONSTRUCTION.
27. A SEPARATE DESIGN IS REQUIRED FOR ALL WALLS 24" AND OVER IN HEIGHT FROM THE GRADE AND SUBJECT TO SEPARATE PERMITS TO BE OBTAINED BY THE OWNERS.

GEOTECHNICAL AND STRUCTURAL DESIGN IS TO BE COMPLETED BY OTHERS. THIS FINAL SITE PLAN SHOWS LOCATION, PROPOSED GRADING, AND DESIGN OF ALL THE WALLS.

28. SUBMIT A SURVEY, CONSISTENT WITH THE REQUIREMENTS FOR CERTIFICATE OF OCCUPANCY CHECKLIST, TO THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES PRIOR TO REQUESTING AN INSPECTION FOR A CERTIFICATE OF OCCUPANCY.
29. ALL SANITARY LATERALS AND/OR SEWERS NOT SHOWN IN THE EASEMENTS SHALL BE OWNED AND MAINTAINED PRIVATELY.
30. ALL STORM DRAINS NOT SHOWN WITHIN AN EASEMENT OR IN A PUBLIC RIGHT OF WAY SHALL BE OWNED AND MAINTAINED PRIVATELY.
31. ALL WATER FACILITY CONSTRUCTION SHALL CONFORM TO VIRGINIA AMERICAN WATER COMPANY STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL CONTACT VIRGINIA AMERICAN WATER COMPANY AT (703) 549-7080 TO COORDINATE CONSTRUCTION AND INSPECTION OF WATER FACILITIES.
32. THE SIDEWALKS SHALL REMAIN OPENED DURING CONSTRUCTION OR PEDESTRIAN ACCESS SHALL BE MAINTAINED TO THE SATISFACTION OF THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES THROUGHOUT THE CONSTRUCTION OF THE PROJECT.
33. PRIOR TO THE RELEASE OF THE FINAL SITE PLAN, A TRAFFIC CONTROL PLAN FOR CONSTRUCTION DETAILING PROPOSED CONTROLS TO TRAFFIC MOVEMENT, LANE CLOSURES, CONSTRUCTION ENTRANCES, HAUL ROUTES, AND STORAGE AND STAGING SHALL BE PROVIDED FOR INFORMATION PURPOSE; HOWEVER, AN AMENDED TRAFFIC CONTROL PLAN, IF REQUIRED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES SHALL BE SUBMITTED TO THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES ALONG WITH THE BUILDING PERMIT APPLICATION. THE FINAL SITE PLAN SHALL INCLUDE A STATEMENT "FOR INFORMATION ONLY" ON THE TRAFFIC CONTROL PLAN SHEETS.
34. A CERTIFICATE OF OCCUPANCY SHALL BE OBTAINED PRIOR TO ANY OCCUPANCY OF THE BUILDING OR PORTION THEREOF, IN ACCORDANCE WITH VIRGINIA USBC 115.0.

EMERGENCY VEHICLE EASEMENTS NOTE

ALL EMERGENCY VEHICLE EASEMENTS ARE SHOWN ON THE PLAN AND SHALL BE RECORDED WITH ALEXANDRIA LAND RECORDS.

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION

EXISTING CONDITIONS

CRITICAL AREAS

EROSION CONTROL PROGRAM

VIRGINIA UNIFORM CODING SYSTEM FOR EROSION AND SEDIMENT CONTROL PRACTICES

LEGEND

(The plan shall include all symbols, abbreviations, and line types used in this plan.)

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. AN EROSION AND SEDIMENT CONTROL PLAN MUST BE APPROVED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES PRIOR TO ANY LAND DISTURBING ACTIVITY GREATER THAN 2,500 SQUARE FEET.
2. ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA AND VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH), VIRGINIA REGULATIONS §4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.
3. AN EROSION AND SEDIMENT CONTROL PLAN IS INCLUDED WITH THESE FINAL PLANS FOR APPROVAL BY THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR REFERENCE BY THE EROSION AND SEDIMENT CONTROL PERMIT.
4. A "CERTIFIED LAND DISTURBER" (CLD) SHALL BE NAMED IN A LETTER TO THE DIVISION CHIEF OF CONSTRUCTION AND INSPECTION (C&I), DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES PRIOR TO ANY LAND DISTURBING ACTIVITIES. IF THE CLD CHANGES DURING THE PROJECT, THAT CHANGE MUST BE NOTED IN A LETTER TO THE DIVISION CHIEF. A NOTE TO THIS EFFECT SHALL BE PLACED ON THE PHASE I EROSION AND SEDIMENT CONTROL SHEETS ON THE SITE PLAN.
5. THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, CONSTRUCTION AND INSPECTION (C&I) DIVISION MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENTS OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION. THE RESPONSIBLE CERTIFIED LAND DISTURBER (CLD) SHALL ATTEND THE PRE-CONSTRUCTION MEETING.
6. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND ALL OTHER EROSION AND SEDIMENT CONTROL MEASURES INTENDED TO CONTROL EROSION AND TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
7. CONSTRUCTION SHALL BE SEQUENCED SUCH THAT GRADING OPERATION CAN BEGIN AND END AS QUICKLY AS POSSIBLE. AREAS NOT TO BE DISTURBED MUST BE CLEARLY MARKED OR FLAGGED.

8. AN INSPECTION BY THE CITY OF ALEXANDRIA IS REQUIRED AFTER INITIAL INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND BEFORE ANY CLEARING OR GRADING CAN BEGIN.
9. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
10. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN THOSE INDICATED ON THESE PLANS INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS, THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE CITY OF ALEXANDRIA.
11. THE DEVELOPER AND CONTRACTORS ARE TO KEEP DENUDED AREAS TO A MINIMUM. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 10 DAYS MUST BE SEEDED FOR TEMPORARY VEGETATION AND MULCHED WITH STRAW MULCH OR OTHERWISE STABILIZED.
12. ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED AS SOON AS POSSIBLE BUT NO LATER THAN 48 HOURS AFTER GRADING.
13. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
14. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED THROUGH AN APPROVED FILTERING DEVICE OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY IMPACT FLOWING STREAMS OR OFF-SITE PROPERTY.
15. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES DAILY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
16. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY TO PREVENT EROSION AND SEDIMENTATION AND

AS DETERMINED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL (T&ES) SERVICES OF THE CITY OF ALEXANDRIA.

17. ANY DENUDED SLOPES, EITHER DISTURBED OR CREATED BY THIS PLAN THAT EXCEED 2500 SQUARE FEET SHALL BE SODDED AND PEGGED FOR STABILITY AND EROSION CONTROL. AT THE COMPLETION OF THE PROJECT AND PRIOR TO THE RELEASE OF THE BOND, ALL DISTURBED AREAS SHALL BE STABILIZED PERMANENTLY AND ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED.
18. ALL VEHICLES SHALL BE CLEANED BEFORE ENTERING ONTO THE PUBLIC RIGHT-OF-WAY.
19. THE WASH WATER FROM THE CONSTRUCTION ENTRANCE SHALL BE FILTERED THROUGH THE PROVIDED SILT FENCE TO ENSURE THAT NO SEDIMENT LADEN RUNOFF IS ALLOWED TO RUNOFF ON TO THE ADJACENT PROPERTY OR THE PUBLIC RIGHT OF WAY.
20. INSTALL SILT FENCE AND TREE PROTECTION, WHERE APPLICABLE.
21. DUST CONTROL SHALL BE ACCOMPLISHED BY TEMPORARY VEGETATIVE COVER AND BY IRRIGATION AS NEEDED.

SEQUENCE OF CONSTRUCTION FOR INSTALLATION OF EROSION AND SEDIMENT CONTROL DEVICES

1. INSTALL PERIMETER EROSION AND SEDIMENT CONTROLS; AND STABILIZE CONSTRUCTION ENTRANCE AS SHOWN ON THIS PLAN.
2. ALL VEGETATION PRESERVATION AND PROTECTION METHODS SHALL BE APPROVED / VERIFIED IN FIELD BY THE CITY ARBORIST PRIOR TO COMMENCEMENT OF ANY GROUND DISTURBING ACTIVITY.
3. INSTALL INLET PROTECTION AT EXISTING STORM DRAIN INLETS AS NECESSARY AND AS SHOWN ON THIS PLAN.
4. INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL PRACTICES AS NECESSARY AND AS DIRECTED BY THE EROSION AND SEDIMENT CONTROL INSPECTOR.
5. CONDUCT DEMOLITION AND CONSTRUCTION ACTIVITIES ACCORDING TO THE APPLICABLE PLANS.
6. AS CONTRIBUTARY DRAINAGE AREAS ARE STABILIZED AND WITH THE PERMISSION OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, REMOVE INDIVIDUAL EROSION AND SEDIMENT CONTROL PRACTICES.

7. UPON COMPLETION OF DEMOLITION, CONSTRUCTION AND LAND DISTURBING ACTIVITIES; PROVIDE PERMANENT STABILIZATION ACCORDING TO APPROVED METHODS AND REMOVE ALL REMAINING EROSION AND SEDIMENT CONTROL MEASURES WITH THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR.

SEDIMENT TRAPS AND BASINS

SINCE THE TOTAL DRAINAGE AREA TO BE SERVED IS LESS THAN THREE ACRES, THEREFORE, A SEDIMENT TRAP IS DESIGNED USING THE CRITERIA THAT THE MINIMUM STORAGE CAPACITY OF THE TRAP IS 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA.

OR.

SINCE THE TOTAL DRAINAGE AREA TO BE SERVED IS GREATER THAN THREE ACRES, THEREFORE, A SEDIMENT BASIN IS DESIGNED USING THE CRITERIA THAT THE MINIMUM STORAGE CAPACITY OF THE TRAP IS 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM IS DESIGNED TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR 24-HOUR DURATION STORM. THE RUNOFF COEFFICIENTS USED IN THE RUNOFF CALCULATIONS CORRESPOND TO THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.

COMPUTATION OF PEAK RUNOFF RATE

THE PRE AND POST DEVELOPMENT PEAK RATES OF RUNOFF ARE COMPUTED BY THE RATIONAL METHOD USING THE CITY OF ALEXANDRIA INTENSITY-DURATION-FREQUENCY (IDF) CURVES, DESIGN AND CONSTRUCTION STANDARDS, DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, JULY 1989. AN INLET TIME OF CONCENTRATION OF 5 MINUTES HAS BEEN USED FOR BUSINESS, COMMERCIAL, APARTMENT AND TOWNHOUSE COMPLEXES AS IN AN ULTRA URBAN ENVIRONMENT. ALL HYDROLOGIC ANALYSES RELATED TO PRE AND POST DEVELOPMENT ARE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT OF THE SUBJECT PROJECT, RESPECTIVELY.

STORMWATER MANAGEMENT PLAN

THE PLAN DEMONSTRATES THE DRAINAGE DIVIDE AREAS ON THE GRADING PLAN ALONG WITH THE STRUCTURES WHERE EACH SUB-AREA DRAINS. [If the drainage divide areas are not shown on the grading plan sheet then these must be shown on a sheet that has reasonable information on topography.]

THERE IS A STORM WATER INLET AVAILABLE WITHIN 100' OF THE DEVELOPMENT SITE; THEREFORE, THE ROOF, SURFACE AND SUBSURFACE DRAINAGE IS CONNECTED WITH CONTINUOUS UNDERGROUND PIPE TO THIS INLET PER THE REQUIREMENTS OF THE CITY OF ALEXANDRIA CODE SECTION 8-1-22.

OR

THERE IS NO PUBLIC STORM SEWER INLET AVAILABLE WITHIN 100' OF THE PROPERTY LINE; THEREFORE, A DESIGN HAS BEEN PROVIDED TO MITIGATE THE NEGATIVE IMPACTS OF STORM WATER DRAINAGE ONTO ADJACENT PROPERTIES AND PUBLIC RIGHT-OF-WAY IN ACCORDANCE TO THE REQUIREMENTS OF MEMORANDUM TO INDUSTRY ON DOWNSPOUTS, FOUNDATION DRAINS, AND SUMP PUMPS, DATED JUNE 18, 2004, WHICH IS AVAILABLE ON THE CITY OF ALEXANDRIA'S WEB SITE.

THE PLAN DEMONSTRATES THAT THE SITE HAS BEEN DEVELOPED NOT TO INCREASE THE POST DEVELOPMENT PEAK RUNOFF RATE FROM THE PRE-DEVELOPMENT PEAK RUNOFF RATE FOR A TWO-YEAR AND TEN YEAR STORM CONSIDERED INDIVIDUALLY PER THE REQUIREMENTS OF ARTICLE 13-109(F)(1) OF ALEXANDRIA ZONING ORDINANCE. THEREFORE, NO DETENTION IS PROVIDED. [This note is subject to revision pending the amendment of detention requirements by the Commonwealth of Virginia, Department of Conservation and Recreation (DCR)].

OR

THE PLAN DEMONSTRATES THAT THE SITE HAS BEEN DEVELOPED TO INCREASE THE POST DEVELOPMENT PEAK RUNOFF RATE FROM THE PRE-DEVELOPMENT PEAK RUNOFF RATE FOR A TWO-YEAR AND TEN YEAR STORM CONSIDERED INDIVIDUALLY. THEREFORE, STORMWATER DETENTION IS PROVIDED PER THE REQUIREMENTS OF ARTICLE 13-109(F)(1) OF ALEXANDRIA ZONING ORDINANCE NOT TO RELEASE STORMWATER FROM THE SITE AT A HIGHER RATE THAN PRE DEVELOPMENT CONDITION. AN ADEQUATE OUTFALL ANALYSIS IS PROVIDED TO DEMONSTRATE THAT THE STORMWATER IS DISCHARGED INTO AN ADEQUATE OUTFALL PER THE REQUIREMENTS OF ARTICLE XI, SECTION 11-410 (N). [This note is subject to revision pending the amendment of detention requirements by the Commonwealth of Virginia, Department of Conservation and Recreation (DCR)].

OR

THE PLAN DEMONSTRATES THAT THE SITE HAS BEEN DEVELOPED TO INCREASE THE POST DEVELOPMENT PEAK RUNOFF RATE FROM THE PRE-DEVELOPMENT PEAK RUNOFF RATE FOR A TWO-YEAR AND TEN YEAR STORM CONSIDERED INDIVIDUALLY. NO STORMWATER DETENTION IS PROVIDED PER THE REQUIREMENTS OF ARTICLE 13-109(F)(1) OF ALEXANDRIA ZONING ORDINANCE; HOWEVER, A WAIVER FOR STORMWATER DETENTION HAS BEEN GRANTED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES (COPY ATTACHED) SINCE THE LAND DISTURBANCE FOR THIS DEVELOPMENT IS LESS THAN ONE-HALF ACRE AND/OR PROVIDING DETENTION WILL ADVERSELY IMPACT THE CITY'S FLOOD CONTROL PROGRAM. AN ADEQUATE OUTFALL ANALYSIS IS PROVIDED TO DEMONSTRATE THAT THE STORMWATER IS DISCHARGED INTO AN ADEQUATE OUTFALL PER THE REQUIREMENTS OF ARTICLE XI, SECTION 11-410 (N). [This note is subject to revision pending the amendment of detention requirements by the Commonwealth of Virginia, Department of Conservation and Recreation (DCR)].

INSERT THE FOLLOWING NOTE, IF DEVELOPMENT AREA LIES WITHIN BRADDOCK WEST SUB WATERSHED:

SINCE THE DEVELOPMENT OR REDEVELOPMENT AREA LIES IN THE BRADDOCK WEST SUB WATERSHED, ADDITIONAL DETENTION IS PROVIDED SO THAT THE POST DEVELOPMENT FLOW RATE RELEASED FROM THE SITE IS LESS THAN 90% OF THE PRE DEVELOPMENT FLOW RATE..

ADEQUATE OUTFALL ANALYSIS

THE PLAN DEMONSTRATES THE AVAILABILITY OF A STORM SEWER ADEQUATE OUTFALL IN COMPLIANCE WITH THE REQUIREMENTS OF VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION (DCR), EROSION AND SEDIMENT CONTROL (ESC) REGULATIONS (4VAC50-30-40.19) MINIMUM STANDARD 19 (MS-19), ARTICLE XI SECTION 11-410 (N) OF THE ALEXANDRIA ZONING ORDINANCE (AZO), AND THE APPROVED CONDITION OF DEVELOPMENT.

IF AN ADEQUATE OUTFALL IS PRESENT

THE PLAN DEMONSTRATES THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL OR STORM SEWER IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; THEREFORE, AN ADEQUATE STORM WATER OUTFALL IS ASSUMED TO BE AVAILABLE. (The note shall accompany hydrologic and hydraulic computations to demonstrate the availability of a storm sewer adequate outfall)

OR

THE PLAN DEMONSTRATES THAT AN EXISTING NATURAL CHANNEL IS NOT OVERTOPPED FOR A TEN-YEAR STORM AND DOES NOT PRODUCE EROSION VELOCITIES FOR A TWO YEAR STORM; THEREFORE, AN ADEQUATE STORM WATER OUTFALL IS ASSUMED TO BE AVAILABLE. (The note shall accompany

hydrologic and hydraulic computations to demonstrate the availability of a storm sewer adequate outfall).

AND/OR

THE PIPES AND STORM SEWER SYSTEM DEMONSTRATES THAT A TEN-YEAR STORM IS CONTAINED WITHIN THE PIPE OR SYSTEM AND THE HYDRAULIC GRADE LINE (HGL) IS AT LEAST TWO FEET BELOW THE TOP OF THE MANHOLE ; THEREFORE, AN ADEQUATE STORM WATER OUTFALL IS ASSUMED TO BE AVAILABLE. (The note shall accompany hydrologic and hydraulic computations to demonstrate the availability of a storm sewer adequate outfall).

IF AN ADEQUATE OUTFALL IS NOT PRESENT

THE HYDROLOGIC AND HYDRAULIC COMPUTATIONS DEMONSTRATE THE NON-AVAILABILITY OF AN ADEQUATE STORM WATER OUTFALL FOR POST DEVELOPMENT CONDITIONS; THEREFORE, THE CHANNEL IS IMPROVED SUCH THAT A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT PRODUCE EROSION VELOCITIES. THE HYDRAULIC GRADE LINE (HGL) IS DEMONSTRATED TO BE 2 FEET BELOW GROUND SURFACE.

OR

THE HYDROLOGIC AND HYDRAULIC COMPUTATIONS DEMONSTRATE THE NON-AVAILABILITY OF AN ADEQUATE STORM WATER OUTFALL FOR POST DEVELOPMENT CONDITIONS; THEREFORE, THE PIPE OR PIPE SYSTEM HAS BEEN IMPROVED TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES AND HYDRAULIC GRADE LINE (HGL) IS A MINIMUM OF 2 FEET BELOW GROUND SURFACE.

OR

THE HYDROLOGIC AND HYDRAULIC COMPUTATIONS DEMONSTRATE THE NON-AVAILABILITY OF AN ADEQUATE STORM WATER OUTFALL FOR POST DEVELOPMENT CONDITIONS; THEREFORE, THE SITE HAS BEEN DEVELOPED NOT TO INCREASE THE POST DEVELOPMENT PEAK RUNOFF RATE FROM THE PRE-DEVELOPMENT PEAK RUNOFF RATE FOR A TWO-YEAR AND TEN YEAR STORM CONSIDERED INDIVIDUALLY PER THE REQUIREMENTS OF ARTICLE 13-109(F)(1) OF ALEXANDRIA ZONING ORDINANCE. IN ADDITION TO NOT INCREASING THE POST DEVELOPMENT PEAK RUNOFF RATE FROM THE PRE DEVELOPMENT CONDITIONS, A COMBINATION OF CHANNEL IMPROVEMENTS, STORMWATER DETENTION OR OTHER MEASURES HAVE BEEN DESIGNED TO PROVIDE AN ADEQUATE OUTFALL TO THE SATISFACTION OF THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES. THESE IMPROVEMENTS

SHALL PRODUCE NON EROSION VELOCITIES IN THE PROPOSED IMPROVEMENTS AND THE EXISTING SYSTEM. THE PROPOSED IMPROVEMENTS ARE NOT CONSTRUCTED IN THE PUBLIC RIGHT OF WAY.

STORMWATER BMP AND DETENTION FACILITIES MAINTENANCE AGREEMENT

THE APPLICANT SHALL SUBMIT TO THE CITY OF ALEXANDRIA A STORMWATER BMP AND DETENTION FACILITIES MAINTENANCE AGREEMENT WITH FINAL #2 SUBMISSION. (Amend the note to include or exclude the stormwater detention facilities, as applicable, in the Agreement). THE MAINTENANCE AGREEMENT SHALL BE REGISTERED WITH ALEXANDRIA LAND RECORDS.

OR

THE APPLICANT HAS SUBMITTED TO THE CITY OF ALEXANDRIA AND ACCEPTED BY THE CITY A STORMWATER BMP AND DETENTION FACILITIES MAINTENANCE AGREEMENT. (Amend the note to include or exclude the stormwater detention facilities, as applicable, in the Agreement). THE MAINTENANCE AGREEMENT HAS BEEN REGISTERED WITH ALEXANDRIA LAND RECORDS.

ENVIRONMENTAL SITE ASSESSMENT

1. THERE ARE NO TIDAL WETLANDS, TIDAL SHORES, TRIBUTARY STREAMS, FLOODPLAINS, CONNECTED TIDAL WETLANDS, ISOLATED WETLANDS, HIGHLY ERODIABLE/PERMEABLE SOILS OR BUFFER AREAS ASSOCIATED WITH SHORES, STREAMS, OR WETLANDS LOCATED ON THE SITE. FURTHER, THERE ARE NO WETLAND PERMITS REQUIRED FOR THIS DEVELOPMENT PROJECT. ADDITIONALLY, THERE ARE NO KNOWN UNDERGROUND STORAGE TANKS OR AREAS OF SOIL OR GROUNDWATER CONTAMINATION ON THE SITE.
2. THE CITY OF ALEXANDRIA DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, OFFICE OF ENVIRONMENTAL QUALITY MUST BE NOTIFIED IF UNUSUAL OR UNANTICIPATED CONTAMINATION OR UNDERGROUND STORAGE TANKS, DRUMS, AND CONTAINERS ARE ENCOUNTERED AT THE SITE. IF THERE IS ANY DOUBT ABOUT PUBLIC SAFETY OR A RELEASE TO THE ENVIRONMENT, THE ALEXANDRIA FIRE DEPARTMENT MUST BE CONTACTED IMMEDIATELY BY CALLING 911. THE TANK OR CONTAINER'S REMOVAL, ITS CONTENTS, ANY SOIL CONTAMINATION AND RELEASES TO THE ENVIRONMENT WILL BE HANDLED IN ACCORDANCE WITH FEDERAL, STATE, AND CITY REGULATIONS.
3. ALL WELLS TO BE DEMOLISHED IN THIS PROJECT, INCLUDING MONITORING WELLS MUST BE CLOSED IN ACCORDANCE WITH VIRGINIA STATE WATER CONTROL BOARD (VSWCB) REQUIREMENTS. CONTACT ENVIRONMENTAL HEALTH SPECIALIST AND COORDINATE WITH THE ALEXANDRIA HEALTH DEPARTMENT AT 703-838-4400 EXT 267/255.
4. ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE ALEXANDRIA NOISE CONTROL CODE TITLE 11, CHAPTER 5, WHICH PERMITS CONSTRUCTION ACTIVITIES TO OCCUR BETWEEN THE FOLLOWING HOURS:
 - MONDAY THROUGH FRIDAY FROM 7 AM TO 6 PM AND
 - SATURDAYS FROM 9 AM TO 6 PM.
 - NO CONSTRUCTION ACTIVITIES ARE PERMITTED ON SUNDAYS.

PILE DRIVING IS FURTHER RESTRICTED TO THE FOLLOWING HOURS:

- MONDAY THROUGH FRIDAY FROM 9 AM TO 6 PM AND
- SATURDAYS FROM 10 AM TO 4 PM.

STORMWATER BEST MANAGEMENT PRACTICES (BMP) NOTES

THE STORMWATER BEST MANAGEMENT PRACTICES (BMP) REQUIRED FOR THIS PROJECT SHALL BE CONSTRUCTED AND INSTALLED UNDER THE DIRECT SUPERVISION OF THE DESIGN ENGINEER OR HIS DESIGNATED REPRESENTATIVE. THE DESIGN ENGINEER SHALL MAKE A WRITTEN CERTIFICATION TO THE CITY THAT THE BMPs ARE CONSTRUCTED AND INSTALLED AS DESIGNED AND IN ACCORDANCE WITH THE APPROVED SITE PLAN. IN ADDITION, AGGREGATE LAYERS AND COLLECTOR PIPES MAY NOT BE INSTALLED UNLESS THE DESIGN ENGINEER OR HIS REPRESENTATIVE IS PRESENT.

THE CONTRACTOR SHALL FURNISH THE CITY WITH AN OPERATION AND MAINTENANCE MANUAL FOR ALL BMPs ON THE PROJECT. THE MANUAL SHALL INCLUDE AN EXPLANATION OF THE FUNCTIONS AND OPERATIONS OF EACH BMP AND ANY SUPPORTING UTILITIES, CATALOG CUTS ON ANY MECHANICAL OR ELECTRICAL EQUIPMENT AND A SCHEDULE OF ROUTINE MAINTENANCE FOR THE BMPs AND SUPPORTING EQUIPMENT.

UTILITY WORKS

UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING MINIMUM STANDARDS DESCRIBED IN SECTION 4VAC50-30-40 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH) AND ADDITIONAL APPLICABLE PRACTICES FOLLOWED BY THE CITY OF ALEXANDRIA:

- A. ALL PRIVATE UTILITIES SHALL BE LOCATED OUTSIDE OF THE PUBLIC RIGHT-OF-WAY AND PUBLIC UTILITY EASEMENTS UNLESS THE UTILITY OWNERS HAVE FRANCHISE AGREEMENT WITH THE CITY OF ALEXANDRIA; HOWEVER, NO ELECTRIC TRANSFORMERS AND SWITCH GEARS / CONTROL BOXES SHALL BE PLACED IN THE PUBLIC RIGHT OF WAY.
- B. ALL THE EXISTING AND PROPOSED PUBLIC AND PRIVATE UTILITIES AND EASEMENTS SHALL BE SHOWN AND A DESCRIPTIVE NARRATION OF VARIOUS UTILITIES SHALL BE PROVIDED ON THE PLAN.
- C. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN UTILITY SERVICES AT ALL TIMES DURING CONNECTION AND/OR CONSTRUCTION.
- D. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- E. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
- C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED

THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.

- D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ACCORDANCE WITH THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- E. SHOULD UTILITY CONSTRUCTION BE PERFORMED AFTER COMPLETING EARTHWORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACHIEVING 98 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1551) COMPACTION IN ALL TRENCH BACKFILL.
- F. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE VIRGINIA REGULATIONS §4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS, VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH).
- G. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- H. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL CONTROL MEASURES AS NECESSARY TO PREVENT EROSION AND SEDIMENTATION, AS DETERMINED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, CITY OF ALEXANDRIA.
- I. A REMEDIATION PLAN SHALL BE SUBMITTED DETAILING HOW CONTAMINATED SOILS AND/OR GROUNDWATER WILL BE DEALT WITH, INCLUDING PLANS TO REMEDIATE UTILITY CORRIDORS.
- J. UTILITY CORRIDORS IN CONTAMINATED SOIL SHALL BE OVER EXCAVATED BY 2 FEET AND BACKFILLED WITH "CLEAN" SOIL.
- K. GRADING CAN BE PERFORMED ON INSTALLATION OF UTILITIES.
- L. ALL UTILITIES SUCH AS ELECTRICAL LINES, GAS PIPES, COMMUNICATION CABLES, INCLUDING WATER AND SEWER LATERALS ON PRIVATE PROPERTY IN THE CITY OF ALEXANDRIA SHALL BE PROVIDED WITH MINIMUM 3" WIDE 5 MIL OVERALL THICKNESS DETECTABLE UNDERGROUND WARNING TAPE (DUWT). THE DUWT SHALL BE INSTALLED AT DEPTHS OF 12" TO 18" FOR DUWT WIDTHS OF 3" AND 24" FOR WIDTHS OF 6" SO AS TO MAKE UNDERGROUND INSTALLATIONS EASY TO FIND USING A NON-FERROUS LOCATOR. THE DUWT SHALL BE WITH ALUMINUM BACKING OR SOLID ALUMINUM CORE LAMINATED WITH A PROTECTIVE CLEAR FILM ON BOTH SIDES, SEALING AND PROTECTING THE GRAPHICS FROM UNDERGROUND

MOISTURE, ACIDS, ALKALIS, AND OTHER SOIL SUBSTANCES. ALL DUWT TAPES SHALL BE PRINTED IN BLACK INK ON AMERICAN PUBLIC WORKS ASSOCIATION (APWA) APPROVED COLORS TO MEET OR EXCEED INDUSTRY STANDARDS.

COLOR	CODES
RED	CAUTION BURIED ELECTRIC POWER LINES, CABLES, CONDUITS, AND LIGHTING CABLES
YELLOW	CAUTION GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE	CAUTION COMMUNICATIONS, ALARM OR SIGNAL LINES, CABLES, OR CONDUITS
BLUE	CAUTION POTABLE WATER
PURPLE	CAUTION RECLAIMED WATER, IRRIGATION AND SLURRY LINES
GREEN	CAUTION SEWER, DRAIN LINES, AND FORCE MAIN

SOLID WASTE MANAGEMENT

1. IN COMPLIANCE WITH TITLE 5: TRANSPORTATION AND ENVIRONMENTAL SERVICES, SECTION 5-1-31 OF THE CITY CHARTER AND CODE, THE CITY OF ALEXANDRIA WILL PROVIDE SOLID WASTE COLLECTION SERVICES TO EVERY USER PROPERTY, DEFINED IN SECTION 5-1-2 (12B) AS CONTAINING FOUR OR FEWER DWELLING UNITS EXCLUDING CONDOMINIUM DWELLINGS.

SINCE THE CITY OF ALEXANDRIA IS PROVIDING SOLID WASTE COLLECTION AND DISPOSAL SERVICES, THE PLAN DEMONSTRATES THAT THE DEVELOPMENT MEETS ALL THE MINIMUM STREET STANDARDS, INCLUDING ALL STANDARD CUL-DE-SAC TURNAROUNDS, IF APPLICABLE. THE TRASH TRUCK TURNING MOVEMENTS DEMONSTRATE THAT THE TRASH TRUCK IS ABLE TO PICK UP SOLID WASTE FROM PRIVATE STREETS WITHOUT BACKING UP.

SINCE THE CITY OF ALEXANDRIA WILL PROVIDE THE SOLID WASTE COLLECTION AND DISPOSAL SERVICES; ALL TRASH AND RECYCLING RECEPTACLES ARE SHOWN LOCATED AT THE CITY'S RIGHT-OF-WAY.

OR

SINCE THE APPLICANT IS NOT REQUIRED BY SECTION 5-1-31 OF THE CITY CHARTER AND CODE TITLE 5: TRANSPORTATION AND ENVIRONMENTAL SERVICES TO USE THE CITY OF ALEXANDRIA'S COLLECTION AND DISPOSAL SERVICES; SOLID WASTE COLLECTION AND

DISPOSAL SERVICES SHALL BE PROVIDED BY THE APPLICANT / PRIVATE COLLECTORS AND SHALL BE PASSED ON TO THE NEW OWNER IN CASE OF A SALE OF THE PROPERTY SUBSEQUENT TO THE DEVELOPMENT.

THE PLAN DEMONSTRATES THAT ADEQUATE SPACE WITHIN EACH UNIT TO ACCOMMODATE A CITY STANDARD SUPER CAN AND RECYCLING CONTAINER HAS BEEN PROVIDED. THE CONTAINERS ARE PLACED INSIDE THE UNITS OR WITHIN AN ENCLOSURE THAT COMPLETELY SCREENS THEM FROM VIEW. THE DEVELOPER SHALL PURCHASE THE STANDARD CONTAINERS FROM THE CITY OR PROVIDE CONTAINERS THAT ARE COMPATIBLE WITH CITY COLLECTION SYSTEM AND APPROVED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.

THE PLAN DEMONSTRATES THAT ADEQUATE SPACE FOR SOLID WASTE AND RECYCLING CONTAINERS HAS BEEN PROVIDED AND THE DEVELOPMENT MEETS ALL THE MINIMUM STREET STANDARDS, INCLUDING ALL STANDARD CUL-DE-SAC TURNAROUNDS, IF APPLICABLE. THE TRASH TRUCK TURNING MOVEMENTS DEMONSTRATE THAT THE TRASH TRUCK IS ABLE TO PICK UP SOLID WASTE FROM PRIVATE STREETS WITHOUT BACKING UP. THE CONTAINERS HAVE BEEN PLACED WITHIN AN ENCLOSURE THAT COMPLETELY SCREENS THEM FROM VIEW.

2. IN THE EVENT SECTION 5-1-2(12B) OF THE CITY CHARTER AND CODE TITLE 5: TRANSPORTATION AND ENVIRONMENTAL SERVICES IS AMENDED TO DESIGNATE MULTI-FAMILY DWELLINGS IN GENERAL, OR MULTI-FAMILY DWELLINGS WHEN SO PROVIDED BY SPECIAL USE PERMIT (SUP), AS REQUIRED USER PROPERTY [AS DEFINED IN 5-1-2(12B) OF THE CITY CHARTER AND CODE], THEN REFUSE COLLECTION SHALL BE PROVIDED BY THE CITY FOR THE TOWNHOME CONDOMINIUM PORTION OF THIS PLAN.

SIGN CONSTRUCTION

A SEPARATE PERMIT IS REQUIRED FOR SIGN CONSTRUCTION.

LANDSCAPE NOTES

1. ALL PROTECTION AND PRESERVATION MEASURES FOR EXISTING VEGETATION, INCLUDING MAINTENANCE AND PENALTIES SHALL BE PREPARED IN COMPLIANCE WITH LANDSCAPE GUIDELINES OF THE CITY OF ALEXANDRIA AND APPROVED BY THE CITY ARBORIST IN-FIELD PRIOR TO COMMENCEMENT OF ANY SITE DISTURBING AND CONSTRUCTION ACTIVITIES.
2. ALL VEGETATION PRESERVATION AND PROTECTION METHODS SHALL BE APPROVED / VERIFIED IN FIELD BY THE CITY ARBORIST PRIOR TO COMMENCEMENT OF ANY GROUND DISTURBING ACTIVITY.

3. LOCATION AND METHOD FOR PROTECTION AND PRESERVATION OF EXISTING TREES WILL BE SHOWN ON DEMOLITION, SEDIMENT AND EROSION CONTROL, AND LANDSCAPE PLAN SHEETS.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE SURE THAT ANY EXISTING LANDSCAPING WHICH IS TO BE RELOCATED ON THE SITE WILL BE CAREFULLY STORED IN A DESIGNATED AREA BEFORE BEING REPLANTED. COORDINATION WITH THE OWNER FOR MUTUALLY AGREEABLE STORAGE LOCATIONS FOR LANDSCAPE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF PLANT MATERIAL THAT DOES NOT SURVIVE STORAGE AND REPLANTING.
5. APPLICANT MUST INCLUDE ON THE PLAN DOCUMENTATION OF COMMUNICATION WITH THE ADJACENT PROPERTY OWNER(S) VERIFYING NOTIFICATION OF AND AGREEMENT WITH CONSTRUCTION IMPACT, POTENTIAL FOR LOSS, AND AGREED UPON REMEDIAL MEASURES PERTAINING TO THE EXISTING TREE(S) ON ADJACENT PROPERTIES THAT WILL BE AFFECTED BY PROJECT WORK.
6. INCLUDE SPECIFIC CONSTRUCTION STAGING INFORMATION ON THE PLAN THAT INDICATES THE METHODS, AND PROCEDURES TO BE IMPLEMENTED FOR PROTECTION OF EXISTING ON-SITE AND OFF-SITE VEGETATION.
7. PROPOSED PLANTING SHALL BE PROVIDED IN COMPLIANCE WITH LANDSCAPE GUIDELINES OF THE CITY OF ALEXANDRIA.
8. SPECIFICATION FOR ALL PLANTINGS SHALL BE IN ACCORDANCE WITH THE CURRENT AND MOST UP TO DATE EDITION OF ANSI-Z60.1, THE AMERICAN STANDARD FOR NURSERY STOCK AS PRODUCED BY THE AMERICAN ASSOCIATION OF NURSERYMEN; WASHINGTON, D.C.
9. THE APPLICANT SHALL MAKE SUITABLE ARRANGEMENTS FOR PRE-SELECTION TAGGING, PRE-CONTRACT GROWING, OR IS UNDERTAKING SPECIALIZED PLANTING STOCK DEVELOPMENT WITH A NURSERY OR GROWER THAT IS CONVENIENTLY LOCATED TO THE PROJECT SITE, OR UTILIZING OTHER PROCEDURES THAT WILL ENSURE AVAILABILITY OF SPECIFIED MATERIALS. IN THE EVENT THAT SHORTAGES AND/OR INABILITY TO OBTAIN SPECIFIED PLANTINGS OCCURS, REMEDIAL EFFORTS INCLUDING SPECIES CHANGES, ADDITIONAL PLANTINGS AND MODIFICATION TO THE LANDSCAPE PLAN SHALL BE UNDERTAKEN BY THE APPLICANT. ALL REMEDIAL EFFORTS SHALL, WITH PRIOR APPROVAL BY THE CITY, BE PERFORMED TO THE SATISFACTION OF THE DIRECTORS OF PLANNING & ZONING, RECREATION, PARKS & CULTURAL ACTIVITIES AND TRANSPORTATION & ENVIRONMENTAL SERVICES.

10. IN LIEU OF MORE STRENUOUS SPECIFICATIONS, ALL LANDSCAPE RELATED WORK SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CURRENT AND MOST UP-TO-DATE EDITION (AT TIME OF CONSTRUCTION) OF LANDSCAPE SPECIFICATION GUIDELINES AS PRODUCED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF MARYLAND, DISTRICT OF COLUMBIA AND VIRGINIA; GAITHERSBURG, MARYLAND.
11. PRIOR TO COMMENCEMENT OF LANDSCAPE INSTALLATION/PLANTING OPERATIONS, A PRE-INSTALLATION/CONSTRUCTION MEETING WILL BE SCHEDULED WITH THE CITY'S ARBORIST AND LANDSCAPE ARCHITECTS TO REVIEW THE SCOPE OF INSTALLATION PROCEDURES AND PROCESSES.
12. MAINTENANCE FOR THIS PROJECT SHALL BE PERFORMED IN PERPETUITY BY THE APPLICANT/OWNER/SUCCESSOR, IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND/OR AS CONDITIONED BY PROJECT APPROVAL.
13. A CERTIFICATION LETTER FOR TREE WELLS, TREE TRENCHES AND PLANTINGS ABOVE STRUCTURE SHALL BE PROVIDED BY THE PROJECT'S LANDSCAPE ARCHITECT. THE LETTER SHALL CERTIFY THAT ALL BELOW GRADE CONSTRUCTION IS IN COMPLIANCE WITH APPROVED DRAWINGS AND SPECIFICATIONS. THE LETTER SHALL BE SUBMITTED TO THE CITY ARBORIST AND APPROVED PRIOR TO APPROVAL OF THE LAST AND FINAL CERTIFICATE OF OCCUPANCY FOR THE PROJECT. THE LETTER SHALL BE SUBMITTED BY THE OWNER/APPLICANT/SUCCESSOR AND SEALED AND DATED AS APPROVED BY THE PROJECT'S LANDSCAPE ARCHITECT.
14. AS-BUILT DRAWINGS FOR THIS LANDSCAPE PLAN AND/OR IRRIGATION/WATER MANAGEMENT SYSTEM WILL BE PROVIDED IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES. AS-BUILT DRAWINGS SHALL INCLUDE CLEAR IDENTIFICATION OF ALL VARIATION(S) AND CHANGES FROM APPROVED DRAWINGS INCLUDING LOCATION, QUANTITY AND SPECIFICATION OF ALL PROJECT ELEMENTS.

DEMOLITION NOTES

1. A SEPARATE PERMIT IS REQUIRED FOR DEMOLITION; HOWEVER, NO DEMOLITION SHALL BEGIN UNTIL ALL EROSION AND SEDIMENT AND TREE PROTECTION CONTROLS ARE IN

PLACE AND ARE APPROVED BY AN EROSION AND SEDIMENT CONTROL INSPECTOR OF THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.

2. ALL WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH THE MOST CURRENT APPLICABLE FEDERAL, STATE , AND LOCAL LAWS AND REGULATIONS, INCLUDING BUT NOT LIMITED, TO ENVIRONMENTAL PROTECTION AGENCY (EPA), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), VIRGINIA OCCUPATIONAL AND SAFETY HELATH COMPLIANCE PROGRAM (VOSH ENFORCEMENT), VIRGINIA OVERHEAD HIGH VOLTAGE LINE SAFETY ACT, NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS), AND NATIONAL INSTITUTUE OF OCCUPATIONAL SAFETY AND HEALTH (NIOSH).
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF WORK WITH REPRESENTATIVE UTILITY COMPANIES AND FOR THE IMPLEMENTATION OF REQUIRED UTILITY-RELATED WORK.
4. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE UPON ENCOUNTERING ANY HAZARDOUS MATERIALS DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL DOCUMENT SAME TO THE OWNER'S REPRESENTATIVE AND OBTAIN DIRECTION AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
5. DISCONNECTION OF SERVICES AND SYSTEMS SUPPLYING UTILITIES TO BE ABANDONED OR DEMOLISHED SHALL BE COMPLETED PRIOR TO OTHER SITE DEMOLITION IN FULL COMPLIANCE WITH APPLICABLE CODES, REGULATIONS, AND THE REQUIREMENTS OF UTILITY PURVEYORS HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE UTILITY PURVEYORS, PAYMENT OF ASSOCIATED FEES AND PROCUREMENT OF ALL NECESSARY PERMITS.
6. PRIOR TO REMOVAL OF MATERIALS OVER EXISTING UTILITY SYSTEMS, THE CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS AND, IF AT VARIANCE WITH CONDITIONS AS REPRESENTED ON THE PLANS, NOTIFY THE OWNER'S REPRESENTATIVE AND OBTAIN DIRECTIONS AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
7. THE CONTRACTOR SHALL BACKFILL EXCAVATED AREAS WITH APPROVED MATERIALS / CLEAN FILL AS PER THE REQUIREMENTS OF VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT).
8. THE CONTRACTOR SHALL PROTECT AND PREVENT DAMAGE TO EXISTING ON-SITE UTILITY DISTRIBUTION FACILITIES THAT ARE TO REMAIN. ACTIVE UTILITY DISTRIBUTION FACILITIES ENCOUNTERED DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES SHALL BE SHUT OFF AT THE SERVICE MAIN WITH THE APROVAL OF THE OWNER'S REPRESENTATIVE.

9. DURING DEMOLITION AND/OR CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE UPON ENCOUNTERING ANY EXISTING UTILITIES AND/OR UTILITY SYSTEM STRUCTURES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL DOCUMENT THE SAME AND FORWARD THE INFORMATION TO THE RESIDENT ENGINEER / OWNER'S REPRESENTATIVE, AND OBTAIN DIRECTION AS TO THE APPROPRIATE ACTION(S) TO BE TAKEN.
10. THE CONTRACTOR OR APPLICANT SHALL WORK WITH THE CITY STAFF TO REUSE THE EXISTING, LEFTOVER, UNUSED, AND/OR DISCARDED BUILDING MATERIALS AS PART OF THE DEMOLITION PROCESS OR THE CONSTRUCTION DEBRIS MUST BE REMOVED TO AN APPROVED LANDFILL WITH ADEQUATE FREQUENCY IN ACCORDANCE WITH THE VIRGINIA STATE LITTER CONTROL ACT.

CONSTRUCTION NOTES

1. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY ACTION AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUATION OF SERVICE.
2. THE CONTRACTOR SHALL DIG TEST PITS AS REQUIRED FOLLOWING NOTIFICATION AND MARKING OF ALL EXISTING UTILITIES TO VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES TEST HOLES TO BE PERFORMED AT LEAST 30 DAYS PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE OWNER AND ENGINEER. REDESIGN AND APPROVAL BY REVIEWING AGENCIES SHALL BE OBTAINED, IF REQUIRED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND THE ENGINEER OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS OBTAINED FROM ANY AUTHORITY ISSUING PERMITS.
4. THE CONTRACTOR SHALL VISIT THE SITE AND SHALL VERIFY EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION.
5. THE CONTRACTOR SHALL CLEAR THE SITE OF ALL TREES, BUILDINGS, FOUNDATIONS, ETC., WITHIN THE LIMITS OF CONSTRUCTION UNLESS OTHERWISE SPECIFIED, AND SHALL BE RESPONSIBLE FOR ENSURING THAT EXISTING UTILITIES ARE DISCONNECTED.
6. THE DEVELOPER SHALL PROVIDE OVER-LOT GRADING TO PROVIDE POSITIVE DRAINAGE AND PRECLUDE PONDING OF WATER.
7. ALL AREAS, ON OR OFF-SITE, WHICH ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON, SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. THE MINIMUM ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS, SEED MIXTURE TO BE AS RECOMMENDED BY THE CITY AGENT. ALL SLOPES 3:1 AND GREATER SHALL BE SODDED AND PEGGED OF OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY OF ALEXANDRIA.
8. EXISTING SEPTIC FIELDS, IF APPLICABLE, SHALL BE ABANDONED IN ACCORDANCE WITH VIRGINIA HEALTH DEPARTMENT STANDARDS AND SPECIFICATIONS.

9. ALL ABOVE GROUND UTILITIES SERVING THE SITE SHALL BE RELOCATED AS REQUIRED BY THE OWNING UTILITY COMPANIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL ARRANGEMENTS AND COORDINATING ALL WORK REQUIRED FOR THE NECESSARY RELOCATIONS.
10. PRIOR TO BEGINNING OF CONSTRUCTION, CONTRACTOR SHALL VERIFY FROM THE ARCHITECTURAL DRAWINGS ALL DIMENSIONS, DETAILS, AND TREATMENTS FOR THE PROPOSED BUILDINGS, WALKWAYS, AND OTHER PROPOSED CONSTRUCTION WHERE INDICATED ON THE PLANS.
11. THE CONTRACTOR IS TO VERIFY INVERT, SIZE, AND LOCATION OF BUILDING UTILITY CONNECTIONS WITH THE MECHANICAL PLANS PRIOR TO PLACEMENT OF UNDERGROUND UTILITIES.
12. EXISTING BUILDINGS, FENCES AND OTHER EXISTING PHYSICAL FEATURES ARE TO BE REMOVED AS REQUIRED BY THE CONSTRUCTION.
13. EXISTING CONSTRUCTION SHALL BE REMOVED TO NEAREST JOINT. NEW CONSTRUCTION SHALL BE PROVIDED AS SHOWN AND ANY DAMAGED AREA SHALL BE REPAIRED TO MATCH CONDITIONS EXISTING PRIOR TO CONSTRUCTION OR TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES.
14. ALL PRIVATE BUILDING CONNECTIONS ARE TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT PLUMBING CODE.
15. TOPS OF EXISTING STRUCTURES WHICH REMAIN IN USE ARE TO BE ADJUSTED IN ACCORDANCE WITH THE GRADING PLAN. ALL PROPOSED STRUCTURE TOP ELEVATIONS ARE TO BE VERIFIED BY THE CONTRACTOR WITH THE SITE GRADING PLANS. IN CASE OF CONFLICT, THE GRADING PLAN SHALL SUPERSEDE PROFILE ELEVATIONS. MINOR ADJUSTMENTS TO MEET FINISHED GRADE ELEVATIONS, IF REQUIRED, SHALL BE MADE IN THE FIELD WITH THE APPROVAL OF SITE INSPECTOR OF THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.
16. THE DESIGN, CONSTRUCTION, FIELD PRACTICES, AND METHODS SHALL CONFORM TO THE REQUIREMENTS SET FORTH BY THE CITY OF ALEXANDRIA ZONING ORDINANCE AND DESIGN AND CONSTRUCTION STANDARDS MANUAL. FAILURE TO COMPLY WITH THE CODE, APPLICABLE MANUALS, AND PROVISIONS OF THE CONSTRUCTION AND ESCROW AGREEMENTS OR THE PERMITS SHALL BE DEEMED A VIOLATION.
17. THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE OWNER/DEVELOPER OR HIS AGENT OF ANY LEGAL RESPONSIBILITIES WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA OR ANY ORDINANCE ENACTED BY THE CITY OF ALEXANDRIA.

18. CONSTRUCTION STAKEOUT SHALL BE UNDER THE DIRECT SUPERVISION OF A LICENSED LAND SURVEYOR IN THE COMMONWEALTH OF VIRGINIA.
19. THE CONTRACTOR IS REFERRED TO STRUCTURAL, GEOTECHNICAL, MECHANICAL, AND ARCHITECTURAL PLANS FOR FOUNDATION TREATMENT INCLUDING, BUT NOT LIMITED TO, SHEETING AND SHORING FOR BUILDING EXCAVATION, WATERPROFFING FOR FILL AGAINST BUILDINGS, LOCATION OF MECHANICAL EQUIPMENT, AND CONNECTIONS AT THE FACES OF BUILDINGS.
20. SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE EXISTING ROAD TO THE PROPOSED ENTRANCE AND/OR CURB & GUTTER TO PRECLUDE THE FORMING OF FALSE GUTTER AND/OR PONDING OF WATER ON THE ROADWAY.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING A SMOOTH TRANSITION TO EXISTING CURB AND SIDEWALKS, IF APPLICABLE.
22. THE CALIFORNIA BEARING RATIO (CBR) VALUES OF IN-SITU MATERIALS SHALL BE DETERMINED BY FIELD AND/OR LABORATORY TESTS FOR ACTUAL DETERMINATION OF REQUIRED THICKNESSES OF SURFACE, BASE, SUB-BASE, AND SUB GRADE MATERIALS. THE PAVEMENT SECTION SHALL BE DESIGNED BY A GEOTECHNICAL /LICENSED PROPOFESSIONAL ENGINEER TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR ALL PAVEMENTS INCLUDING EMERGENCY VEHICLE EASEMENT (EVE) TO SUPPORT H-20 LOADING. IN THE CASE OF PAVEMENT PATCHES, PAVEMENT SECTION MUST MEET OR EXCEED EXISTING SECTION.
23. THE THICKNESSES OF SUB-BASE, BASE, AND WEARING COURSE SHALL BE DESIGNED USING "CALIFORNIA METHOD" AS SET FORTH ON PAGE 3-76 OF THE SECOND EDITION OF A BOOK ENTITLED, "DATA BOOK FOR CIVIL ENGINEERS, VOLUME ONE, DESIGN" WRITTEN BY ELWYN E. SEELYE. AN ALTERNATE PAVEMENT SECTION DESIGNED TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR ALL PAVEMENTS INCLUDING EMERGENCY VEHICLE EASEMENT (EVE) TO SUPPORT H-20 LOADING BASED ON CBR AND VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) METHOD (VASWANI METHOD) AND STANDARD MATERIAL SPECIFICATIONS SHALL BE ACCEPTABLE.
24. EMERGENCY VEHICLE EASEMENTS (EVE) AND AMERICAN WITH DISTABILITY (ADA) ACCESSIBLE PARKING SPACES MUST BE DELINEATED WITH PAVEMENT MARKINGS PER THE CITY OF ALEXANDRIA STANDARD SIGNAGE AND AMERICAN WITH DISABILITIES (ADA) REQUIREMENTS.
25. ALL STRIPING SHALL MEET THE REQUIRMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS (LATEST EDITION) AND SHALL BE THERMOPLASTIC UNLESS OTHERWISE SPECIFIED.

26. ALL EARTHWORK OPERATIONS ARE TO BE PERFORMED UNDER THE FULL TIME, ON-SITE SUPERVISION OF A REGISTERED GEOTECHNICAL ENGINEER WITH GEOTECHNICAL TESTING IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS AND GEOTECHNICAL REPORT REQUIREMENTS.
27. THE CONTRACTORS SHALL NOT CAUSE OR PERMIT VEHICLES TO IDLE FOR MORE THAN 10 MINUTES WHEN PARKED.
28. UNLESS OTHERWISE APPROVED THE CONTRACTOR SHALL PROVIDE THERMOPLASTIC LADDER STYLE / STANDARD PEDESTRIAN CROSS WALKS AT ALL CROSSINGS AT THE PROPOSED DEVELOPMENT, WHICH MUST BE DESIGNED TO THE SATISFACTION OF THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES. THE DESIGN OF LADDER STYLE OR STANDARD PEDESTRIAN CROSS WALK SHALL BE EVALUATED ON A CASE BY CASE BASIS AND SHALL COMPLY WITH THE REQUIREMENTS OF POLICY MANUAL SECTION 30.18, PEDESTRIAN CROSSWALKS, JULY 13, 2006. A COPY OF THE POLICY MANUAL CAN BE OBTAINED FROM YON LAMBERT, BICYCLE AND PEDESTRIAN COORDINATOR / TRANSPORTATION PLANNER, TELEPHONE (703) 746-4081.

RESOURCE PROTECTION AREA NOTES

1. THE SUBJECT PROPERTY DOES NOT LIE WITHIN THE CITY OF ALEXANDRIA RESOURCE PROTECTION AREA (RPA) AND THERE ARE NO MAPPED RPA'S ON THIS PROPERTY.

OR

1. THE SUBJECT PROPERTY LIES WITHIN A CITY OF ALEXANDRIA RESOURCE PROTECTION AREA (RPA). FIELD DEMARCATED/VERIFIED 50 FEET AND 100 FEET RESOURCE PROTECTION AREA LINES ARE SHOWN ON THE SITE PLAN.
2. VEGETATION IN RPA SHALL NOT BE DISTURBED.
3. DEVELOPMENT AND USES PROPOSED IN THE RPA ARE IN COMPLIANCE WITH THE REQUIREMENTS OF ARTICLE 13-107 OF THE ALEXANDRIA ZONING ORDINANCE (AZO).

FLOOD PLAIN NOTES

1. THE SITE DOES NOT LIE WITHIN 100-YEAR FLOOD PLAIN WATER SURFACE ELEVATION (WSE) PER THE DEMARCATION OF THE CURRENT FLOOD INSURANCE RATE MAP (FIRM) PUBLISHED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).

OR

1. THE SITE LIES WITHIN 100-YEAR FLOOD PLAIN WATER SURFACE ELEVATION (WSE) AND THE 100-YEAR FLOOD PLAIN WSE IS SHOWN ON THE SITE PLAN PER THE DEMARCATION

OF THE CURRENT FLOOD INSURANCE RATE MAP (FIRM) PUBLISHED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).

2. THE PLAN DEMONSTRATES COMPLIANCE WITH FLOOD PLAIN ORDINANCE SECTION 6-300 TO SECTION 6-311 OF ARTICLE VI SPECIAL AND OVERLAY ZONES OF THE ALEXANDRIA ZONING ORDINANCE (AZO).

OR

THE PLAN DEMONSTRATES COMPLIANCE WITH THE CONDITIONS OF SITE PLAN APPROVAL.

ARCHAEOLOGY NOTES

1. ALL REQUIRED ARCHAEOLOGICAL PRESERVATION MEASURES SHALL BE COMPLETED PRIOR TO GROUND-DISTURBING ACTIVITIES (SUCH AS CORING, GRADING, FILLING, VEGETATION REMOVAL, UNDERGROUNDING UTILITIES, PILE DRIVING, LANDSCAPING AND OTHER EXCAVATIONS AS DEFINED IN SECTION 2-151 OF THE ZONING ORDINANCE) OR A RESOURCE MANAGEMENT PLAN MUST BE IN PLACE TO PRESERVE AND/OR RECOVER SIGNIFICANT RESOURCES IN CONCERT WITH CONSTRUCTION ACTIVITIES. TO CONFIRM, CALL ALEXANDRIA ARCHAEOLOGY AT (703) 838-4399.
2. CALL ALEXANDRIA ARCHAEOLOGY (703/838-4399) TWO WEEKS BEFORE THE STARTING DATE OF ANY GROUND DISTURBANCE SO THAT AN INSPECTION OR MONITORING SCHEDULE FOR CITY ARCHAEOLOGISTS CAN BE ARRANGED. (The submitting engineer must confirm with Alexandria Archaeology at (703) 838-4399 before including this note on the plan)
3. THE APPLICANT SHALL CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY (703-838-4399) IF ANY BURIED STRUCTURAL REMAINS (WALL FOUNDATIONS, WELLS, PRIVIES, CISTERNS, ETC.) OR CONCENTRATIONS OF ARTIFACTS ARE DISCOVERED DURING DEVELOPMENT. WORK MUST CEASE IN THE AREA OF THE DISCOVERY UNTIL A CITY ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.
4. THE APPLICANT SHALL NOT ALLOW ANY METAL DETECTION AND/OR ARTIFACT COLLECTION TO BE CONDUCTED ON THE PROPERTY, UNLESS AUTHORIZED BY ALEXANDRIA ARCHAEOLOGY. FAILURE TO COMPLY SHALL RESULT IN PROJECT DELAYS.

CEMETRY AND/OR BURIAL GROUNDS

THERE IS NO OBSERVABLE, HISTORICAL, OR ARCHAEOLOGICAL EVIDENCE OF CEMETERIES OR BURIAL GROUNDS ON THIS PROPERTY.

OR

THERE IS OBSERVABLE, HISTORICAL, OR ARCHAEOLOGICAL EVIDENCE OF CEMETERIES OR BURIAL GROUNDS ON THIS PROPERTY, WHICH IS DELINEATED ON THE PLAN AND SHALL BE PRESERVED WITHOUT ANY DISTURBANCE. IF BURIALS WILL BE DISTURBED DURING CONSTRUCTION, APPROPRIATE STATE AND LOCAL PERMITS AND COURT ORDERS SHALL BE OBTAINED.

RODENT ABATEMENT NOTE

PRIOR TO THE ISSUANCE OF A DEMOLITION PERMIT OR LAND DISTURBANCE PERMIT, A RODENT ABATEMENT PLAN SHALL BE SUBMITTED TO THE CITY OF ALEXANDRIA BUILDING AND FIRE CODE ADMINISTRATION THAT WILL OUTLINE STEPS THAT WILL BE TAKEN TO PREVENT THE SPREAD OF RODENTS FROM THE CONSTRUCTION SITE TO THE SURROUNDING COMMUNITY AND SEWERS. THE CONTRACTOR CAN CONTACT ALEXANDRIA BUILDING AND FIRE CODE ADMINISTRATION DEPARTMENT AT (703) 838-4644 OR (703) 746-4200 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.

MOSQUITO CONTROL NOTES

1. SINCE STORM WATER MANAGEMENT (SWM) AND BEST MANAGEMENT PRACTICE (BMP) SYSTEMS THAT HOLD WATER FOR MORE THEN 5 DAYS BETWEEN THE MONTHS OF MAY – OCTOBER HAVE THE POTENTIAL TO CAUSE MOSQUITO BREEDING HABITATS; THEREFORE, SUCH BMPs SHALL BE TREATED WITH A REGISTERED MOSQUITO LARVAL CONTROL PRODUCT. ALL LABELS SHOULD BE FOLLOWED FOR APPLICATION RATES AND AMOUNTS.
2. SINCE EXCESSIVE VEGETATION IN EXISTING BMPs ALSO INCREASES THE POTENTIAL FOR MOSQUITO PROBLEMS; THEREFORE, VEGETATION SHALL BE CONTROLLED AND CUT TO REDUCE MOSQUITO BREEDING.
3. CONTACT THE CITY OF ALEXANDRIA ENVIRONMENTAL HEALTH VECTOR BORNE ILLNESS PROGRAM (703-838-4400 EXT. 326, 327) FOR QUESTIONS OR TREATMENT ASSISTANCE.

SITE SPECIFIC NOTES

[THE SUBMITTING PROFESSIONAL ENGINEER OR LICENSED SURVEYOR SHALL BE RESPONSIBLE TO INCLUDE THE SITE SPECIFIC NOTES, AS NEEDED AND/OR WHERE REQUIRED.]


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 05-16

DATE: JUNE 7, 2016

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: LISA JAATINEN, P.E., ACTING DIVISION CHIEF, INFRASTRUCTURE
RIGHT OF WAY DIVISION, TRANSPORTATION AND ENVIRONMENTAL
SERVICES 

SUBJECT: ESI PEER REVIEW PROGRAM CHANGES

Background: The Engineers and Surveyors Institute (ESI) and the City of Alexandria have had a long running contractual relationship to participate in a public/private partnership for the purpose of producing high quality plans and improving plan review processing. Periodically, changes are made to streamline and improve the program. The revisions outlined are in effect as of June 1, 2016.

Process: NEW site plans submitted for Minimum Submission Review (MSR) after June 1, 2016, will submit an application, deposit check and plan set to ESI at the Fairfax County Herrity Building, Room 553. The Transportation and Environmental Services Development Coordinator must still be notified by email at the time of Minimum Submission Review (MSR) to ESI.

Plans that have previously submitted a deposit for ESI review to the City will continue to be billed through the existing process, where the City will manage and coordinate the funds associated with the reviews.

We believe that these changes will benefit the submission and review process of Final Site Plans in the City. If you have any questions, please contact me or Shanna Austin, Development Coordinator, at (703) 746-4064.

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 02-08

DATE: APRIL 28, 2008

TO: HOMEOWNERS, CONTRACTORS, DEVELOPERS AND DESIGN PROFESSIONALS

FROM: EMILY A. BAKER, P.E., CITY ENGINEER *EAB*
TRANSPORTATION & ENVIRONMENTAL SERVICES

SUBJECT: GRADING PLAN REQUIREMENTS AND WAIVER PROVISIONS

The Department of Transportation & Environmental Services (T&ES) has the responsibility for ensuring that storm water and groundwater runoff on private properties does not create a nuisance on adjacent properties or within the public right-of-way. In addition, the T&ES department also ensures compliance with the City and State requirements for erosion and sediment control and Chesapeake Bay water quality requirements. In order to ensure compliance in these areas, T&ES requires that a grading plan be submitted for review and approval prior to the issuing of certain building permits.

On February 12, 2008, the Alexandria City Council approved amendments to Sections 8-1-22(d) and 8-1-30(e) of the City Code relating to grading plans. These amendments spell out the types of construction for which a grading plan is required and associated penalties for noncompliance. Any external site alterations necessitating a building permit are subject to the requirements of these sections. The complete text of City Code Sections 8-1-22(d) and 8-1-30(e), as amended, are attached (Attachment 1).

In summary, City Code Section 8-1-22(d) requires that a grading plan be submitted to and approved by T&ES prior to the issuance of building permits for improvements involving:

- (1) the construction of a new home;
- (2) construction of an addition to an existing home where either
 - (A) the addition exceeds the area of the existing building footprint by 100% or more; or
 - (B) the construction of the addition results in less than 50% of the existing first floor exterior walls, in their entirety, remaining;

- (3) changes to the existing grade elevation of 1 foot or greater;
- (4) changes to existing drainage patterns; or
- (5) land disturbance of 2,500 square feet or greater.

The grading plan must be prepared by a professional engineer or land surveyor licensed by the Commonwealth of Virginia. If the land disturbance is greater than 2,500 square feet, the grading plan will be subject to the requirements of Article XIII of the Alexandria Zoning Ordinance regarding stormwater quality. The requirements for this grading plan are outlined in the attached checklist (Attachment 2). The checklist is also available on the City's website at <http://www.alexandriava.gov/uploadedFiles/tes/info/gradingPlanChecklist.pdf>

A review fee of \$500 must be submitted with the Grading Plan.

WAIVERS

The Director of Transportation & Environmental Services may waive the requirement for a grading plan if the proposed improvements meet the above requirements of (2), (3) or (4) only. Waivers will be granted only where the applicant has demonstrated that the proposed construction will not create a nuisance to adjacent or downstream properties either public or private and that any existing drainage problems on adjacent or downstream properties either public or private will not be exacerbated by proposed construction. **No waiver will be granted for the construction of a new home or where land disturbance will be 2,500 square feet or greater.**

Determination of Disturbed Area: The disturbed land area shall be computed by adding a minimum 10-foot wide work area to the perimeter of the footprint of the proposed improvements and calculating the area within the increased perimeter. In addition, a minimum 10-foot wide access path from the edge of the disturbed area to the street or paved driveway must be included in the disturbed area calculation. It is the responsibility of the applicant to determine if a 10 foot width is sufficient for the building offset and access path to allow for the construction to reasonably take place. In the case where a 10-foot wide perimeter or access path is not sufficient, it is the responsibility of the applicant to delineate limits of disturbance sufficient for the execution of the work. In addition, for any underground pipe or conduit installed beyond the above described work area, a minimum five-foot width along the length of the excavation must be included in the disturbed area. Dumpsters, soil stockpiles and material storage areas must all be included within the limits of land disturbance as well.

Waiver Requests: In order to be considered, waiver requests must be submitted in writing and must contain the following minimum information:

- Proposed grading shown with 2' contours on the subject property and on adjacent parcels for sufficient distance to indicate the relationship of the site to off-site terrain. The scale shall be 1"=30' minimum.

- Buildings and structures, including optional decks and other projections such as canopies, roof overhangs drawn to scale, showing outside dimensions, including height and first floor elevations.
- Property lines
- Easements and significant site features (e.g. Streams, retaining walls, etc.)

(The above information must be provided by a licensed land surveyor)

- The dimensions of the proposed improvements must be shown, drawn to scale.
- The complete disturbed land area, drawn to scale (see Determination of Disturbed Area above).
- The location of all roof drain, sump pump and other concentrated flow discharges must be shown.
- The existing surface drainage patterns must be indicated by the use of dashed flow arrows (arrows indicating the direction of surface flow).
- The proposed drainage patterns must be indicated by the use of solid flow arrows.
- A letter requesting the waiver must be addressed to the Director of Transportation & Environmental Services. The letter must outline the scope of work to be performed and the reason(s) that a waiver of the grading plan requirement is being requested. The following certifications must be included in the letter and must be signed by the property owner or a licensed land surveyor, professional engineer or architect on behalf of the property owner:

- **Drainage Certification:**

I hereby certify that the existing and proposed drainage patterns associated with this project are as depicted herein, that construction of this project will not create a nuisance to adjacent or downstream properties either public or private and that any existing drainage problems on adjacent or downstream properties either public or private will not be exacerbated by construction of this project. I acknowledge that should this project result in the creation of any nuisance, or exacerbation of any existing drainage problem, the City will issue a stop work order and work on this project will not be allowed to resume until a Grading Plan has been submitted to and approved by the City of Alexandria, Department of Transportation and Environmental Services.

- **Disturbed Area Certification:**

I hereby certify that the limits of disturbance associated with this project represent a total land disturbance of less than 2,500 square feet. I further certify that no construction work, material storage, dumpster placement, construction access or disturbance of any other kind will take place beyond the limits of disturbance as depicted. I acknowledge that should this project result in land disturbance equal to or greater than 2,500 square feet, the City will issue a stop work order and work on the project will not be allowed to resume until a Grading Plan has been submitted to and approved by the City of Alexandria, Department of Environmental Services.

- Provide 2 copies of the waiver request letter and plan.
- No reduced, enlarged or faxed copies will be accepted.
- The waiver request must be submitted to the Site Plan Coordinator in Room 4130, City Hall, 301 King Street, Alexandria VA 22314.

The waiver request will be evaluated and the applicant will be notified in writing. If the waiver is granted, the building permit will be processed for review. If the waiver is not granted, a complete grading plan must be submitted and approved prior to the issuance of the building permit.

EXCEPTIONS

If the proposed construction meets the requirement of 8-1-22 (d)(4) **only** (changes to existing drainage patterns) and DOES NOT meet (1), (2), (3) **or** (5) above, the Grading Plan requirement may be waived if the following information is provided:

- A copy of the house location plat with the following information sketched on it:
 - The footprint area of the proposed improvements must be drawn to scale.
 - The dimensions of the proposed improvements must be shown.
 - The existing surface drainage patterns must be indicated by the use of dashed flow arrows (arrows indicating the direction of surface flow).
 - The location of all roof drain, sump pump and other concentrated flow discharges must be shown.
 - The proposed drainage patterns must be indicated by the use of solid flow arrows.
 - The complete disturbed land area, drawn to scale (see Determination of Disturbed Area above).
 - A **Drainage Certification** and **Disturbed Area Certification** (see above) must be provided and signed by the property owner.

The waiver request will be evaluated and the applicant will be notified in writing. If the waiver is granted, the building permit will be processed for review. If the waiver is not granted, a complete grading plan must be submitted and approved prior to the issuance of the building permit.

PENALTIES

If at any time after a waiver is approved, staff determines that either the construction of the improvements has created a drainage nuisance to adjacent properties, that the actual disturbed area is greater than 2500 square feet, or that information presented was otherwise misrepresented, a Stop Work order will be issued pursuant to City Code Section 8-1-30 and will remain in effect until such time as a Grading Plan is submitted and approved.

If at any time after construction has been completed, drainage from the site is determined to

create a nuisance to adjacent properties, other penalties outlined in City Code Section 8-1-3- may be applied, including fines, notwithstanding the City's approval of a waiver or complete grading plan.

If you have any questions about the above requirements, please contact the T&ES Site Plan Coordinator at 703-838-4318.

Attachment 1

Sec. 8-1-22 Method of storm and subsoil water disposal.

(a) Buildings shall have drainage provision for conveying storm water from roofs, paved areas and areaway drains, Subsoil water, condensate, cooling water, etc., on the premise to a public storm sewer: except that where a public storm sewer is not available, an approved method of disposal shall be provided to the satisfaction of the director of transportation and environmental services.

(b) Availability.

(1) For a one-and two-family dwelling, a public storm sewer shall be deemed available when such sewer is within 100 feet of the premises on which the dwelling is located, measured along a street, and a connection may be made lawfully thereto.

(2) For any other buildings, a public storm sewer shall be deemed available when such sewer is within 500 feet of the premises on which the building is located, measured along a street, and a connection may be made lawfully thereto.

(c) Area drains are prohibited from entering septic tanks or public or private sewer systems unless specifically approved in writing by the director of transportation and environmental services.

(d) Prior to the issuance of any building permit for any proposed improvement to real property involving (1) the construction of a new home (2) construction of an addition to an existing home where either (A) the addition exceeds the area of the existing building footprint by 100% or more; or (B) the construction of the addition results in less than 50% of the existing first floor exterior walls, in their entirety, remaining; (3) changes to the existing grade elevation of 1 foot or greater; (4) changes to existing drainage patterns; or (5) land disturbance of 2,500 square feet or greater, a grading and drainage plan prepared by a professional engineer or land surveyor licensed by the Commonwealth of Virginia shall be submitted for review and approval by the director of transportation and environmental services or deputy director/city engineer. Such plan shall demonstrate that post-development drainage will have no greater impact on adjacent or downstream property than pre-development conditions. The requirements for such plans, including without limitation form, content, methods of calculation, and procedures for review and approval, shall be established by regulations promulgated by the director of transportation and environmental services. A plan review fee in the amount of \$500 shall accompany such plan, except that in instances where the proposed improvement is already subject to the erosion and sediment control requirements set forth in section 5-4-1, et seq. of this Code, and a fee has already been paid pursuant to those requirements, no additional fee shall be required. No building permit for improvements subject to this subsection shall be issued until after the grading and drainage plan has been approved. When a grading and drainage plan is required pursuant to subsections (d)(2), (3) or (4) hereof, the requirement may be waived by the director of transportation and environmental services or his designee when such a waiver is requested by the property owner and such request is accompanied by sufficient information to demonstrate to the satisfaction of the director or deputy director/city engineer, in his or her reasonable engineering discretion, that no adverse drainage impacts to abutting or adjacent property will occur as a result of the proposed construction. The director shall promulgate rules and regulations for the application, consideration, grant or denial of such waiver requests, including without limitation rules and regulations specifying the minimum information required for applications, and reasonable criteria and standards for the consideration of such requests. The decision on such requests shall be in writing, and shall state the grounds thereof. The decision to grant or deny a waiver request is committee to the discretion of the director or deputy director/city engineer, and shall not be subject to judicial review. (Ord. No. 4517, 2/12/08, Sec. 1)

Editorial Note: It should be noted that § 3 of Ord. No. 4517 provides, "That this ordinance shall become effective on the date and at the time of final passage provided, however, that the provisions of this ordinance shall not apply to any complete building permit application pending before any City board, tribunal, department, agency, or bureau on the effective date."

Sec. 8-1-30 Violations and penalties.

(a) With the exception of violations of section 8-1-22, a violation of any section or provision of this article shall be a misdemeanor, and any person found guilty of any such violation shall, upon conviction, be punished by a fine of not more than \$500. Each day a violation of any section or provision of this article continues shall be deemed a separate violation. Notwithstanding the foregoing, if the violation of a section or provision of this article is also a violation of a section or provision of article A of this chapter, then section 8-1-6 shall apply to the violation in lieu of this section.

(b) A violation of any section or provision of this article may, in addition to and notwithstanding the penalty provided for in subsection (a) (c) or (d), be restrained, prohibited or enjoined by appropriate proceedings in a court of competent jurisdiction.

(c) Notwithstanding the provisions of subsection (a) and (b), any action or omission constituting a violation of a section or provision of this article which also constitutes a violation of a section or provision of article A shall only be subject to the penalties in section 8-1-6.

(d) Any violation of section 8-1-22 of this article shall be a civil violation that shall be enforced through the levying of a civil penalty, pursuant to section 1-1-11 of this code, of \$100 for a person's first violation and of \$150 for each subsequent violation of the same section or provision. Each day during which a violation exists shall constitute a separate violation. However, a series of violations arising from the same operative set of facts shall not give rise to the levying of a civil penalty more frequently than once in any 10-day period, and shall not result in civil penalties exceeding a total of \$3,000.

(e) In addition to the foregoing penalties, in the event that any person obtains a building permit based on representations that exempt the proposed construction from the grading and drainage plan requirements of section 8-1-22(d), and those representations prove to be incorrect, the director of transportation and environmental services or his designee may issue a written order stopping all work at the site until such time as a grading and drainage plan has been submitted for review and approved pursuant to section 8-1-22(d). (Ord. No. 3849, 3/23/96, Sec. 4; Ord. No. 4433, 12/17/05, Sec. 1; Ord. No. 4517, 2/12/08, Sec. 2)

Editorial Note: It should be noted that § 3 of Ord. No. 4517 provides, "That this ordinance shall become effective on the date and at the time of final passage provided, however, that the provisions of this ordinance shall not apply to any complete building permit application pending before any City board, tribunal, department, agency, or bureau on the effective date."

Attachment 2

GRADING PLAN CHECK LIST SUBMISSION REQUIREMENTS:

Per City of Alexandria Code Section 8-1-22 (d)

Note: The following sheets and information are required for every submission. Additional sheets and information should be provided where necessary to demonstrate compliance with City requirements or conditions of approval. Provide 11 copies of the plan and \$500 fee at first submission.

The Check List shall be completed and submitted with first submission of the plans. Failure to comply may result in the plan being deemed incomplete and unacceptable for review.

Property Address: _____

Owner/Applicant: _____

Owner/Applicant Contact Phone # and Email: _____

Engineer: _____

Engineer Phone # and Email: _____

REQUIREMENTS FOR EACH SHEET

- _____ Print size shall be 24" x 36" and all sheets shall be the same size
- _____ Scale no less than 30' to 1" with scale identified on each sheet
- _____ City grading plan approval signature block in same place (lower right corner) on each sheet
- _____ Date, scale and north arrow with reference to source of meridian
- _____ Name, address, signature and registration number of professional preparing the plan on each sheet (original signature required for mylar submission)
- _____ Date the plan was prepared on each sheet/ Date of latest revision
- _____ Name, address and phone number of the developer/builder and/or the owner(s) of record
- _____ Location map with the site shown in relation to the nearest intersection of two or more streets
- _____ Table of standard symbols per common engineering practice and abbreviations utilized in the plan set.

ADDITIONAL REQUIREMENTS

- _____ A narrative description of the proposed development
- _____ Index to plan sheets
- _____ Total area included in the site plan, total area of tax parcel, total existing and proposed impervious area on the tax parcel, and total area that will be disturbed during construction (all expressed in square feet and acres). The disturbed area will be calculated as described in Memorandum to the Industry on Grading Plan Requirements and Waiver Provisions
- _____ If applicable, a list of all special use permits, variances, certificate of appropriateness, special exception, waivers, etc., **approved** for the Grading Plan (i.e. Curb cut approval)

- _____ Copy of Curb cut approval (if proposed) shown on plan
- _____ City Standard Notes to include: *(amend as applicable- available from Site Plan Coordinator)*
 - Existing Conditions Survey Notes
 - City Standard General Notes
 - Environmental Site Assessment Statement
 - Stormwater Management Notes
 - Utility Works Notes
 - Sequence of Construction Notes
 - Demolition Notes
 - Construction Notes
 - Archaeology Notes
 - Rodent Abatement Note
 - Site Specific Notes

GRADING PLAN

Show location, dimensions, size, height and elevation of the following along with the existing features to be retained:

- _____ Sidewalks, streets, alleys with widths labeled, and elevations
- _____ Building restriction lines, vision clearances (on corner lots)
- _____ Property lines; show course and distance of each site boundary line
- _____ Dimensions of front, side and rear yards
- _____ Buildings and structures, including optional decks and other projections such as canopies, roof overhangs
- _____ Stoops, steps and staircases
- _____ Locations of building entrances and exits
- _____ Sump pump and roof drain outfalls *[Note: Flow from downspouts, foundation drains, and sump pumps shall be discharged as per the requirements of Memorandum to Industry on Downspouts, Foundation Drains, and Sump Pumps, Dated June 18, 2004 available on the City web site.]*
- _____ Existing and proposed storm and sanitary sewer systems, including lateral lines in plan and profile.
- _____ Existing and proposed gas mains and service lines in plan view
- _____ Light poles and fixtures on-site and on adjoining rights-of-way
- _____ Driveways, entrances, exits, parking areas; show parking spaces by type (standard, compact and handicap) and indicate the number in each bay and the total count
- _____ Sidewalks, bike and walking trails on site and on abutting streets or public property/easements
- _____ If applicable, recreation areas, swimming pools, etc.
- _____ Watercourses, bodies of water, wetlands and limits of flood plains
- _____ Depict any Resource Protection Areas as defined in Article XIII of the Zoning Ordinance and delineate their appropriate buffer width

- _____ To any wetland or RPA add a note stating that “RPA buffer shall be vegetated with native riparian species and remain undisturbed. RPA is limited to water dependent facilities or redevelopment.”
- _____ Significant geological features
- _____ Proposed grading shown with 2' contours on the subject property and on adjacent parcels for sufficient distance to indicate the relationship of the site to off-site terrain. The Director of Transportation and Environmental Services (T&ES), at his discretion, may ask to show the contours at a lesser interval than 2', if required, to understand the pattern of micro drainage from the site and/or the adjacent properties.
- _____ Two benchmarks
- _____ Slopes, terraces and retaining walls, including elevations of level areas and tops and bottoms of walls and exterior stairways and ramps
- _____ Indicate elevations at the base of all utility structures other than individual poles, such as fire hydrants and transformers
- _____ Provide rim elevation and invert elevations of all piping at manholes
- _____ Elevations of streets and alleys

ZONING REQUIREMENTS (Provided on cover sheet)

For each element, list zoning ordinance requirement, number approved on preliminary plan and number proposed on final plan, if different.

- _____ Zoning of the site
- _____ Existing use on the site
- _____ Proposed use for the site
- _____ Existing and required lot area
- _____ Depict building restriction line
- _____ Gross square feet (GSF) of existing and new building area (attach P&Z floor area calculations sheet)
- _____ Net square feet (NSF) of existing and new building area (attach P&Z floor area calculations sheet)
- _____ Floor-area-ratio (existing and proposed)
- _____ Open space (existing and proposed)
- _____ Average finished grade of structure for existing and new construction
- _____ Height of structure from existing and average finished grade
- _____ Yards (front, side and rear) required and proposed
- _____ Parking space(s), if applicable listed by total number, size of space and type (compact, standard, and handicapped)
- _____ % of crown coverage existing and proposed (based on P&Z Landscape Guidelines)

****Note: ** If the proposed development includes multiple lots, the zoning tabulation information must be provided for each individual lot unless all the lots will be consolidated in conjunction with the proposal.**

EROSION AND SEDIMENT CONTROL PLANS (When required)

- _____ Delineate the total area that will be disturbed during construction and show it on the plan. Calculate the total disturbed area as described in the Memorandum to the Industry on Grading Plan Requirements and Waiver Provisions in square feet and acres and show it on the plan. If the total disturbed area is more than 2,500 square feet then the proposed improvements shall be designed to complete the requirements of Article XIII of the Zoning Ordinance of the City of Alexandria.
- _____ Narrative phasing plan including demolition and sequence of construction activities
- _____ All appropriate details of erosion and sediment control measures [must meet Virginia Erosion and Sedimentation Control Handbook (VESCH) standards]
- _____ Sources of water for construction entrance wash down
- _____ Grading for drains and traps for construction entrance runoff
- _____ Show and list appropriate control measures defined for each drainage area
- _____ Identify areas having different ground covering materials (i.e. concrete, asphalt, gravel, turf, crushed stone, etc.)
- _____ Delineate any wetlands or Resource Protection Areas (RPA)
- _____ Legend for line types (must be in accordance with VESCH)
- _____ Temporary and permanent seeding mixtures
- _____ Erosion and Sediment Control Narrative to include:
 - Project Description
 - Existing Conditions
 - Critical Areas
 - Adjacent Areas
 - Off-site Areas
 - Erosion and Sediment Control Measures
 - Permanent Stabilization
 - Contaminated Soils
 - Stormwater Runoff Considerations
 - Asphalt Drive Note
 - Tree Note
 - Erosion Control Program
 - Sediment Control Practices
- _____ BMP strategies (projects with 2,500 SF of disturbed area including construction staging and storage.)
- _____ BMP Narrative
- _____ Delineation and description of areas with contaminated soils
- _____ Erosion & Sediment Control Notes (*amend as applicable- available from Site Plan Coordinator*)

STORMWATER MANAGEMENT/BMP SHEETS (When Required)

(See Article XIII of the Zoning Ordinance for guidance on water quality calculations)

- _____ Location and description of RPA components
- _____ Location and nature of RPA encroachment
- _____ Water Quality Impact Assessment, if applicable
- _____ Type and location of proposed BMP, with supporting calculations
- _____ Pre and post development runoff calculations
- _____ Stormwater Narrative
- _____ Stormwater Outfall Narrative
- _____ Drainage divides off-site/on-site identified and delineated
- _____ Water Quality Volume (WQV) computation (in cubic feet and acre-feet)
- _____ Water Quality Worksheets A or B and C
- _____ City standard water quality BMP data blocks (2) (Project Description and Miscellaneous Blocks)
- _____ Signage detail for surface BMP
- _____ Water Quality Improvement Fund request, if applicable, can either be included on the First Final plan with original submitted separately to the Division of Environmental Quality, Department of T&ES for approval. Once the request is approved then both the request and approval letters must be included on the plan of subsequent submissions and/or Mylar.
- _____ BMP and associated structure details
- _____ BMP Sign details

EXISTING AND PROPOSED VEGETATION (When Required)

- _____ Notes for Preservation & Protection of Existing Vegetation *(amend as applicable- available from Site Plan Coordinator)*
- _____ Notes for Proposed Planting *(amend as applicable- available from Site Plan Coordinator)*

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 02-18

DATE: JANUARY 31, 2018

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: LISA JAATINEN, P.E., ACTING DIVISION CHIEF,
INFRASTRUCTURE/RIGHT OF WAY DIVISION, TRANSPORTATION AND
ENVIRONMENTAL SERVICES

SUBJECT: INFORMATION NOTICE FOR PROJECTS REQUIRING A GRADING PLAN
OR GRADING PLAN WAIVER

In response to a request from the City Manager's Office to create a process to inform neighbors of upcoming projects that do not require a public hearing, but involve construction of a new single or two-family dwelling and/or grading, the City is implementing an informational noticing process for all projects requiring a grading plan or a grading plan waiver per Section 5-6-224 of City Code. The following two-part informational noticing process will be implemented by Staff for all new grading plans and new grading plan waivers submitted on or after February 1, 2018.

Email to Neighborhood, Homeowner's or Civic Association

Planning and Zoning will email an Informational Notice to the contact person listed in Community Association Viewer. The email will notify the designated association contact and the association can disseminate the information through their own processes. The notice will include contact information for the applicant and the City.

Placard

Planning and Zoning will also post an Informational Notice Placard on the property. Placards are to be posted for 30 days. The posted placard will allow anyone passing the subject property to be made aware of the future construction and/or grading project.

In addition to the two types of notices, T&ES will maintain a webpage [[LINK](#)] dedicated to providing information on grading plans, and a list of plans currently under review or recently released, is being created as a resource for the public.

Staff will reevaluate this process after the implementation of the new permitting and land management system, as changes may be necessary. The new system is designed to allow the public to access information more readily and may alleviate the need for this type of noticing.

CITY OF ALEXANDRIA, VIRGINIA

MEMORANDUM TO INDUSTRY NO. 01-09

DATE: MAY 28, 2009

TO: DEVELOPERS, CONTRACTORS, ENGINEERS, ARCHITECTS, SURVEYORS,
AND APPLICANTS

FROM: EMILY A. BAKER, P.E., ACTING DIRECTOR
TRANSPORTATION AND ENVIRONMENTAL SERVICES

SUBJECT: PERFORMANCE AND PAYMENT BOND FOR PERMITS TO CROSS THE CURB,
GUTTER, AND SIDEWALK, AND FOR PERMITS FOR INGRESS AND EGRESS

Effective July 1, 2009, the City of Alexandria will require a performance and payment bond for all permits to cross the curb, gutter and sidewalk, and for ingress and egress. A separate bond will be required for each location, with the job location to be shown on the bond. The bond must be in an amount to cover the cost of any damage to the curb, gutter and sidewalk. Bond amounts will be the actual cost the City would incur should it have to replace the sidewalk area, with the minimum bond amount being \$500.00. The amounts will be computed based on unit costs established by contract between the City and its contractor. The bond form will be provided by the Construction and Inspection Division of the Department of Transportation and Environmental Services, at City Hall, 301 King Street, room 4130.

Upon completion of the work covered by the permit, the applicant will be required to call the Construction and Inspection Permit Office at 703-746-4035 and request an inspection. If the inspector deems that repairs are required, the applicant will be notified. In the event that the applicant fails to make the necessary repairs, the bond, or a portion of it, will be utilized by the City to perform the required work. After the inspector determines that the curb, gutter and sidewalk are in acceptable condition, the process to return the bond will be initiated.

A certified check, or a cashier's check may be used in lieu of a bond. The process to refund the check will be the same as for release of the bond.


If you have any questions regarding this change in procedure, you may call Lucky Stokes, P.E., Chief, Construction and Inspection Division at 703-519-6585, or you may call Mitchell C. Bernstein, P.E., Civil Engineer IV, Construction and Inspection Division at 703-746-4035.

City of Alexandria, Virginia

MEMORANDUM TO INDUSTRY NO. 03-01

DATE: DECEMBER 24, 2003

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY A. BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING 
TRANSPORTATION & ENVIRONMENTAL SERVICES

SUBJECT: PERFORMANCE BONDS FOR PUBLIC IMPROVEMENTS

The City of Alexandria is changing the way that Performance Bonds for public improvements are calculated for development plans in the City. In the past, City staff would calculate the bond amount once the review of the final site plan or plot plan was completed. In an effort to improve the process for the release of final plans at this stage, the City is requiring that the bond amount be calculated by the submitting engineer. The attached format shall be used to calculate and submit the bond estimate. The following steps shall be followed:

- The form must be sealed and signed by the professional engineer or licensed land surveyor who has sealed the plans.
- The unit costs used shall be the unit costs provided on the attached form, until such time as they are updated by the City.
- If items are used on the plans that are not covered on the attached form, those items shall be added to the form with an engineers estimate for the cost.
- The form shall be submitted with the second final plan submission to the City. If this is not included with the submission, the submission shall be deemed incomplete.

Once the form is submitted, it will be reviewed by T&ES staff. Comments on the bond estimate will be submitted to the applicant along with the final site plan comments. Subsequent submissions shall include a red-lined copy of the bond estimate addressing staff comments on the bond form as well as any changes as a result of the site plan comments. Once the bond estimate is approved, the applicant shall submit the Performance & Payment Bond form and the Standard Agreement for Installation of Public Improvements along with all fees and insurance certificates.

This process will be in effect for all site plans submitting a Final #1 after January 9, 2004. If you have any questions about the form or the process, please contact me or Geoff Byrd, Site Plan Coordinator, at (703)838-4327.

Attachment

cc: Richard J. Baier, P.E., Director, Transportation & Environmental Services
Geoff Byrd, Site Plan Coordinator
Eileen Fogerty, Director, Planning & Zoning
Jeffery Farner, Division Chief, Planning & Zoning

CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION and ENVIRONMENTAL SERVICES

PERFORMANCE BOND for COST of PUBLIC IMPROVEMENTS

AN ESTIMATE OF THE COST OF PUBLIC IMPROVEMENTS REQUIRED BY THE CITY IN CONNECTION WITH
APPROVAL OF THE [] SITE PLAN, [] PLOT PLAN, [] SUBDIVISION
NAMED BELOW:

Name of Site Plan/Plot Plan/Subdivision: _____

Developer/Owner: _____

Address: _____

PLAN PREPARED BY:
(must be signed and sealed)

SIGNATURE & SEAL

Name: _____ Date: _____

Address: _____

Phone/Fax: _____

PUBLIC IMPROVEMENTS

ITEM	QUANTITY	UNIT	UNIT COST	TOTAL
Grading		Cu. Yd.	\$10.00	
Curb and Gutter (CSCG-1)		L.F.	\$16.00	
Street Paving		Sq. Yd.	\$30.00	
Alley Paving		Sq. Yd.	\$30.00	
Driveway Aprons (CSES-1A)		Each	\$1,500.00	
Sidewalk-concrete (CSSW-1)		Sq. Yd.	\$19.00	
Sidewalk-brick		Sq. Yd.	\$50.00	
Sanitary Sewer (10") < 8' depth		L.F.	\$120.00	
Additional Costs >8' depth		L.F.	\$10.00	
Sanitary Manhole		Each	\$5,000.00	
Storm Sewer (15") < 8' depth		L.F.	\$90.00	
Storm Sewer (18")		L.F.	\$100.00	
Storm Sewer (24")		L.F.	\$135.00	
Storm Sewer (30")		L.F.	\$150.00	
Storm Sewer Manhole		Each	\$5,000.00	
Catch Basin		Each	\$2,500.00	
Yard Inlet		Each	\$2,500.00	
Additional Inlets		Each	\$1,400.00	
Endwall/Headwall (<36")		Each	\$2,500	
BMP Facility		Ac.	\$20,000.00	
Fire Hydrant		Each	\$3,300.00	
Street Lights		Each	\$3,500.00	
Site Lights-Pole		Each	\$1,000.00	
Site Lights-Wall		Each	\$700.00	
SubTotal				



PERFORMANCE BOND
for
COST OF PUBLIC IMPROVEMENTS

PUBLIC IMPROVEMENTS (Cont) TRAFFIC CONTROLS

ITEM	QUANTITY	UNIT	UNIT COST	TOTAL
Pedestrian Crosswalk		Sq. Yd.	\$132.00	
Pedestrian Signals		Pair	\$2,000.00	
Signalized Intersection		Each	\$90,000.00	
Speed Table		Sq. Yd.	\$132.00	
Speed Cushion		Each	\$4,000.00	
Street Name Sign (lighted)		Each	\$1,000.00	
Traffic Control Sign		Each	\$50.00	
Other Traffic Items:				

SubTotal

PUBLIC IMPROVEMENTS (Cont) UNDERGROUND UTILITIES

ITEM	QUANTITY	UNIT	UNIT COST	TOTAL
Utility Undergrounding		L.F.	\$1,000 *	

* or submit utility company cost estimates.

EROSION and SEDIMENT CONTROL

ITEM	QUANTITY	UNIT	UNIT COST	TOTAL
Inlet Protection		Each	\$200.00	
Silt Fence/Straw Bale Barrier		L.F.	\$3.00	
Sediment Trap		Each	\$900.00	
Silt Dam		Each	\$4,200.00	
Rip-Rap		Cu.Yd.	\$45.00	
Diversion Dike		L.F.	\$6.00	
Check Dam		Each	\$200.00	
Temporary Seeding		Sq. Yd.	\$1.00	
Permanent Seeding		Sq. Yd.	\$2.00	
Sodding		Sq. Yd.	\$6.00	
Construction Entrance		Each	\$1,700.00	

Total amount of Erosion & Sediment Control estimate to nearest dollar \$

LANDSCAPING

ITEM	QUANTITY	UNIT	UNIT COST	TOTAL
DECIDUOUS TREES				
3" Cal.		Each	\$250.00	
4" Cal.		Each	\$400.00	
6" Cal.		Each	\$700.00	
6'-8' Height		Each	\$175.00	
8'-12' Height		Each	\$350.00	
EVERGREEN TREES				
6'-8' Height		Each	\$225.00	
8'-12' Height		Each	\$400.00	
12'-16' Height		Each	\$1,000.00	
SHRUBS				
12" -18" Height		Each	\$25.00	
18" -24" Height		Each	\$35.00	
24" -36" Height		Each	\$50.00	
GROUND COVER				
Crownvetch		Sq. Yd.	\$15.00	

Total amount of Landscape bond estimate to nearest dollar \$

TOTAL AMOUNT OF PERFORMANCE BOND (to nearest dollar) \$

ENGINEERING & INSPECTION FEE (% proportion of public improvements per Sec. 5-6-21)

Cost of sewer, curb and gutter and sidewalk	\$	2.50%	\$
Cost of paving	\$	3%	\$

TOTAL amount of inspection fee to nearest dollar \$

SEWER TAP FEE:

(calculated per City Code Sec. 5-6-25.1)

of single family, townhouse or unit of two-family dwelling
 or

of units multifamily dwelling
 or

meter size for commercial dwelling

Total Fee


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 03-07

DATE: AUGUST 2, 2007

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY A. BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING
TRANSPORTATION AND ENVIRONMENTAL SERVICES 

SUBJECT: ACCESSIBLE CURB RAMPS

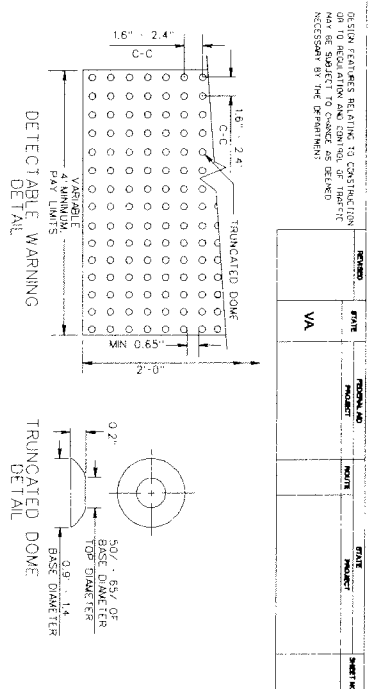
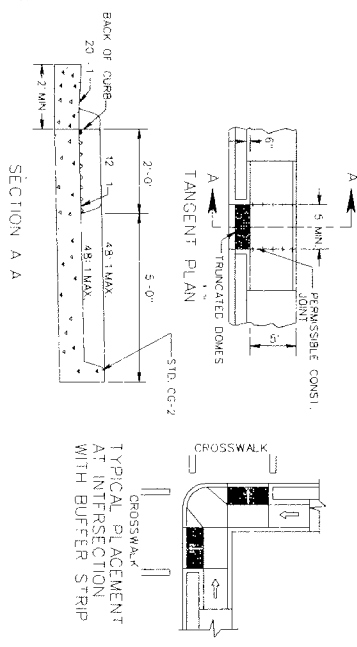
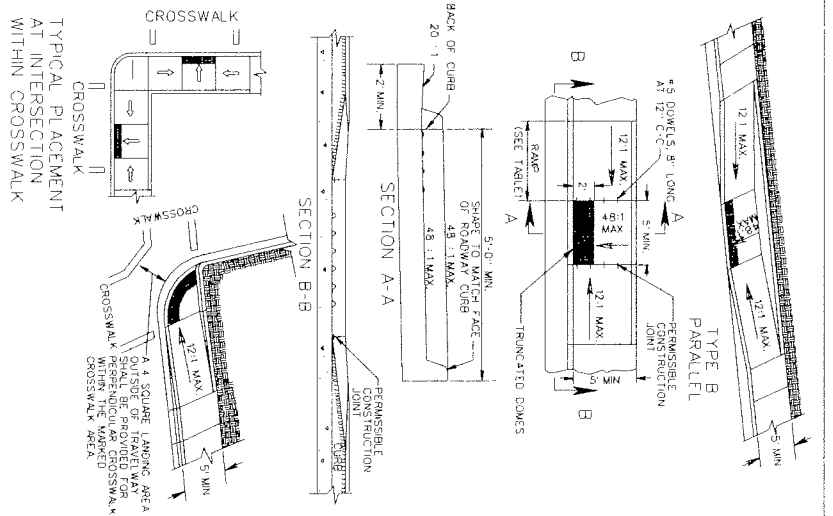
Effectively immediately, the City of Alexandria will require that curb ramps be constructed at intersections for use by persons with mobility impairments. This shall apply to all site plans and plot plans that require curbs along roadways that incorporate accessible pedestrian routes, such as existing or proposed sidewalks.

The curb ramps shall comply with applicable Virginia Department of Transportation's Road and Bridge Standards. The existing curb ramp detail in the City of Alexandria, Design and Construction Standards, issued by the Department of Transportation & Environmental Services, July 1989, p. 38 (CSRP-1) is rescinded and replaced by the attached details.

Local option, variance, or waiver of these standards is prohibited by Code of Virginia § 15.2-2021.

Please find attached, (1) Special Design Section Drawing No.A59 for accessible curb ramps, and (2) CG-12A, 12B and 12C insertable sheets for Detectable Warning Surfaces.

If you have any questions, please contact the Transportation Division Chief at (703) 838-4411.



- | TYPE B | | TYPE C | |
|-----------------------------|--------------------------------|-----------------------------|--------------------------------|
| PARALLEL APPLICATION | | APPLICATION | |
| ROADWAY GRADE
IN PERCENT | MINIMUM RAMP LENGTH
IN FEET | ROADWAY GRADE
IN PERCENT | MINIMUM RAMP LENGTH
IN FEET |
| | 4" CURB 6" CURB | | 4" CURB 6" CURB |
| 0 | 4 | 0 | 4 |
| 1 | 5 | 1 | 5 |
| 2 | 6 | 2 | 6 |
| 3 | 7 | 3 | 7 |
| 4 | 8 | 4 | 8 |
| 5 | 9 | 5 | 9 |
| 6 | 10 | 6 | 10 |
| 7 | 11 | 7 | 11 |
| 8 | 12 | 8 | 12 |
| 9 | 13 | 9 | 13 |
| 10 | 14 | 10 | 14 |
| 11 | 15 | 11 | 15 |
| 12 | 16 | 12 | 16 |
| 13 | 17 | 13 | 17 |
| 14 | 18 | 14 | 18 |
| 15 | 19 | 15 | 19 |
| 16 | 20 | 16 | 20 |
| 17 | 21 | 17 | 21 |
| 18 | 22 | 18 | 22 |
| 19 | 23 | 19 | 23 |
| 20 | 24 | 20 | 24 |
| 21 | 25 | 21 | 25 |
| 22 | 26 | 22 | 26 |
| 23 | 27 | 23 | 27 |
| 24 | 28 | 24 | 28 |
| 25 | 29 | 25 | 29 |
| 26 | 30 | 26 | 30 |
| 27 | 31 | 27 | 31 |
| 28 | 32 | 28 | 32 |
| 29 | 33 | 29 | 33 |
| 30 | 34 | 30 | 34 |
| 31 | 35 | 31 | 35 |
| 32 | 36 | 32 | 36 |
| 33 | 37 | 33 | 37 |
| 34 | 38 | 34 | 38 |
| 35 | 39 | 35 | 39 |
| 36 | 40 | 36 | 40 |
| 37 | 41 | 37 | 41 |
| 38 | 42 | 38 | 42 |
| 39 | 43 | 39 | 43 |
| 40 | 44 | 40 | 44 |
| 41 | 45 | 41 | 45 |
| 42 | 46 | 42 | 46 |
| 43 | 47 | 43 | 47 |
| 44 | 48 | 44 | 48 |
| 45 | 49 | 45 | 49 |
| 46 | 50 | 46 | 50 |
| 47 | 51 | 47 | 51 |
| 48 | 52 | 48 | 52 |
| 49 | 53 | 49 | 53 |
| 50 | 54 | 50 | 54 |
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| 56 | 60 | 56 | 60 |
| 57 | 61 | 57 | 61 |
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| 60 | 64 | 60 | 64 |
| 61 | 65 | 61 | 65 |
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| 64 | 68 | 64 | 68 |
| 65 | 69 | 65 | 69 |
| 66 | 70 | 66 | 70 |
| 67 | 71 | 67 | 71 |
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| 81 | 85 | 81 | 85 |
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| 84 | 88 | 84 | 88 |
| 85 | 89 | 85 | 89 |
| 86 | 90 | 86 | 90 |
| 87 | 91 | 87 | 91 |
| 88 | 92 | 88 | 92 |
| 89 | 93 | 89 | 93 |
| 90 | 94 | 90 | 94 |
| 91 | 95 | 91 | 95 |
| 92 | 96 | 92 | 96 |
| 93 | 97 | 93 | 97 |
| 94 | 98 | 94 | 98 |
| 95 | 99 | 95 | 99 |
| 96 | 100 | 96 | 100 |
| 97 | 101 | 97 | 101 |
| 98 | 102 | 98 | 102 |
| 99 | 103 | 99 | 103 |
| 100 | 104 | 100 | 104 |
| 101 | 105 | 101 | 105 |
| 102 | 106 | 102 | 106 |
| 103 | 107 | 103 | 107 |
| 104 | 108 | 104 | 108 |
| 105 | 109 | 105 | 109 |
| 106 | 110 | 106 | 110 |
| 107 | 111 | 107 | 111 |
| 108 | 112 | 108 | 112 |
| 109 | 113 | 109 | 113 |
| 110 | 114 | 110 | 114 |
| 111 | 115 | 1 | |

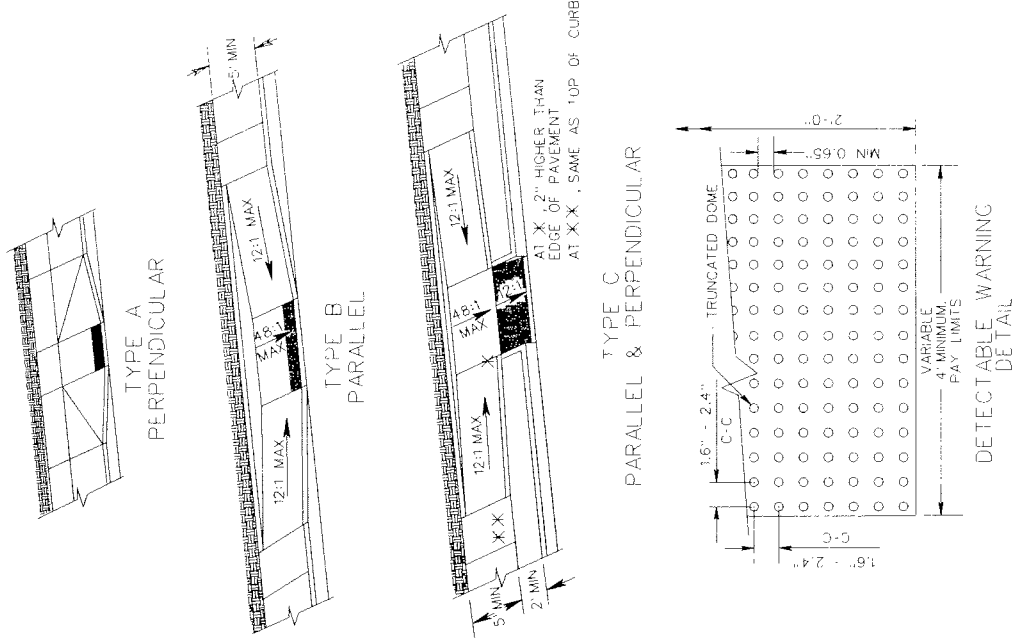
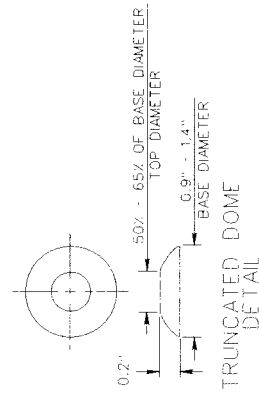
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INSERTABLE SHEET A59

CG-12

GENERAL NOTES:

1. THE DETECTABLE WARNING SHALL BE PROVIDED BY TRUNCATED DOMES.
2. DETECTABLE WARNING TO BE CLASS A-3 CONCRETE (CLASS A-4 IF PRECAST) WITH SLIP RESISTANT INTEGRAL SURFACE COVERING THE FULL WIDTH OF THE RAMP FLOOR BY 2 FOOT IN LENGTH IN THE DIRECTION OF PEDESTRIAN TRAVEL. OTHER TYPES OF MATERIAL WITH THE TRUNCATED DOMES DETECTABLE WARNING MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
3. SLOPING SIDES OF CURB RAMP MAY BE POURED MONOLITHICALLY WITH RAMP FLOOR OR BY USING PERMISSIBLE CONSTRUCTION JOINT WITH REQUIRED BARS SO THAT ADJOINING FLARED SIDES CAN BE CAST IN PLACE AFTER PLACEMENT OF PRECAST RAMP FLOOR. PRECAST CONCRETE SHALL BE CLASS A-4.
4. IF RAMP FLOOR IS PRECAST, HOLES MUST BE PROVIDED FOR DOWEL BARS SO BOTH SIDES OF THE RAMP FLOOR, MID-DEPTH OF RAMP FLOOR, MINIMUM CONCRETE COVER 1 1/2".
5. REQUIRED BARS ARE TO BE NO. 5 X 8' PLACED 1' CENTER TO CENTER ALONG BOTH SIDES OF THE RAMP FLOOR, MID-DEPTH OF RAMP FLOOR. MINIMUM CONCRETE COVER 1 1/2".
6. CURB / CURB AND GUTTER SLOPE TRANSITIONS ADJACENT TO CURB RAMPS ARE INCLUDED IN PAYMENT FOR CURB / CURB AND GUTTER.
7. CURB RAMPS ARE TO BE LOCATED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THEY ARE TO BE PROVIDED AT INTERSECTIONS WHEREVER AN ACCESSIBLE ROUTE WITHIN THE RIGHT OF WAY OF A HIGHWAY FACILITY CROSSES UNDER OR OVER A HIGHWAY FACILITY. WHETHER SIDEWALKS EXISTING, PROPOSED, OR NEW, THE LOCATION OF CURB RAMPS MUST BE LOCATED WITHIN THE HIGHWAY AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER AND SHOULD NOT BE LOCATED BEHIND VEHICLE STOP LINES, EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. ACCESSIBLE ROUTES PROVIDE A CONTINUOUS UNOBSTRUCTED, STABLE, FIRM AND SLIP RESISTANT PATH CONNECTING ALL ACCESSIBLE ELEMENTS OF A FACILITY THAT CAN BE APPROACHED, ENTERED AND USED BY PEDESTRIANS.
8. RAMPS MAY BE PLACED ON RADIAL OR TANGENTIAL SECTIONS PROVIDED THAT THE CURB OPENING IS PLACED WITHIN THE LIMITS OF THE CROSSWALK AND THAT THE SLOPE AT THE CONNECTION OF THE CURB OPENING IS PERPENDICULAR TO THE CURB.
9. TYPICAL CONCRETE SIDEWALK IS 4" THICK. WHEN THE ENTRANCE RADICANNOT ACCOMMODATE THE TURNING REQUIREMENTS OF ANTICIPATED HEAVY TRUCK TRAFFIC, REFER TO STANDARD CG-13, COMMERCIAL ENTRANCE HEAVY TRUCK TRAFFIC FOR CONCRETE DEPTH.
10. WHEN CURB RAMPS ARE USED IN CONJUNCTION WITH A SHARED USE PATH, THE MINIMUM WIDTH SHALL BE THE WIDTH OF THE SHARED USE PATH.



SHEET 1 OF 4

CG-12 DETECTABLE WARNING SURFACE

GENERAL NOTES

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION
REFERENCE

REV. 7/05

203.05

105
502

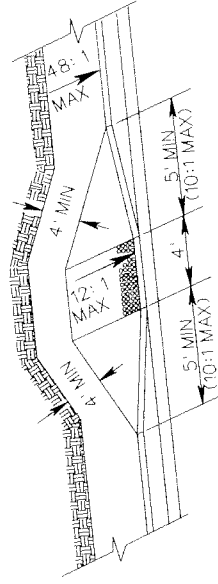
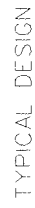
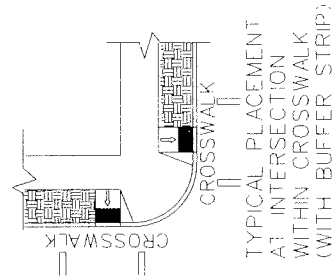
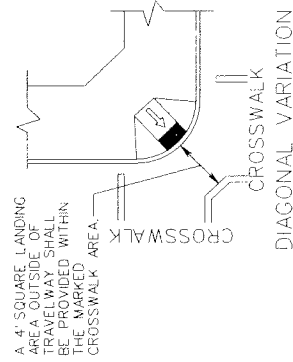


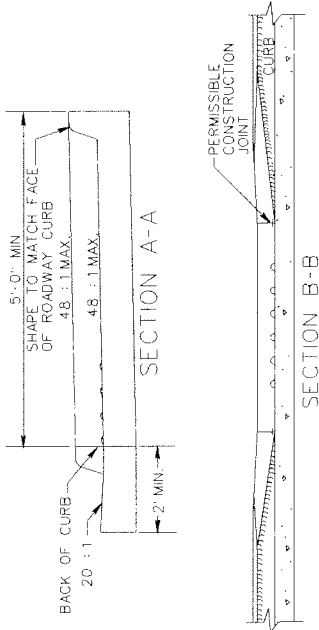
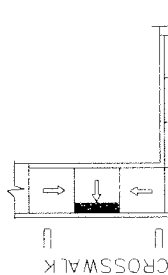
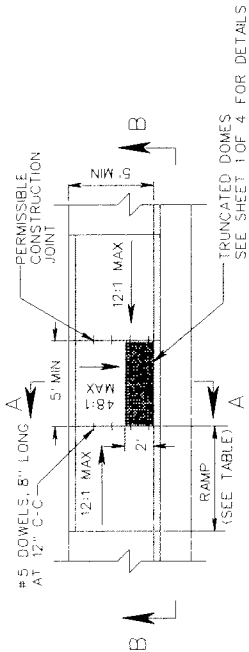
Diagram illustrating the typical placement of crosswalks at an intersection within a crosswalk. The diagram shows a street intersection with a crosswalk. The crosswalk is marked with a solid black rectangle. The text 'CROSSWALK' is written vertically along the crosswalk. The text 'TYPICAL PLACEMENT AT INTERSECTION WITHIN CROSSWALK' is written vertically to the right of the crosswalk.



SPECIFICATION
REFERENCE

CG-12 DETECTABLE WARNING SURFACE
TYPE A (PERPENDICULAR) APPLICATION

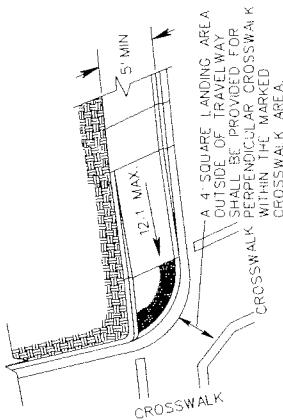
(PERPENDICULAR) A
VIRGINIA DEPARTMENT OF TRANSPORTATION



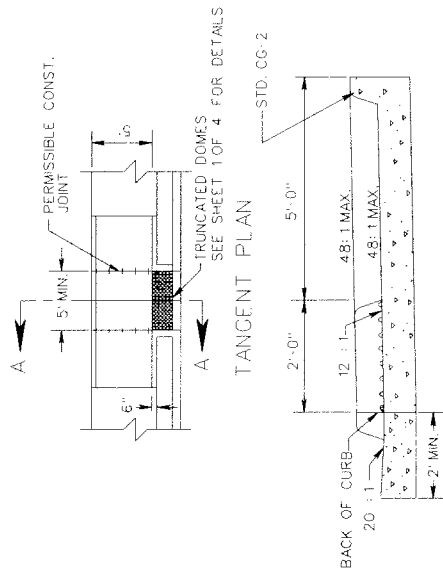
NOTE: FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 4.

TYPE B PARALLEL APPLICATION		
ROADWAY GRADE IN PERCENT	MINIMUM RAMP LENGTH IN FEET	
	4" CURB	6" CURB
0	4	6
1	5	7
2	5	8
3	6	9
4	8	12
5	10	15
6	14	15

NOTE:
THE REQUIRED LENGTH OF A PARALLEL RAMP IS LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.



CG-12

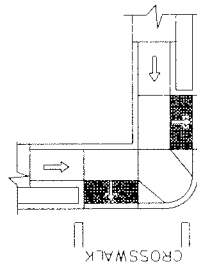


SECTION A-A

NOTE: FOR GENERAL NOTES ON THE DETECTABLE WARNING SURFACE, SEE SHEET 1 OF 4

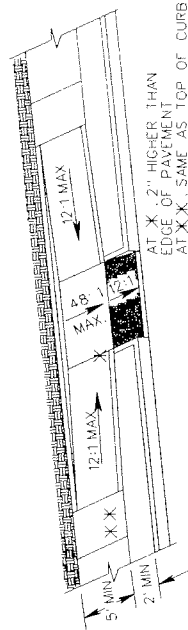
TYPE C PARALLEL & PERPENDICULAR APPLICATION		
ROADWAY GRADE IN PERCENT	MINIMUM RAMP LENGTH IN FEET	
	4" CURB	6" CURB
0	2	4
1	2	5
2	3	5
3	3	6
4	4	8
5	5	10
6	7	14
7	13	15
8	15	15

NOTE:
THE REQUIRED LENGTH OF A PARALLEL RAMP IS
LIMITED TO 15 FEET, REGARDLESS OF THE SLOPE.



TYPICAL PLACEMENT
AT INTERSECTION
WITH BUFFER STRIP

THE SELECTION OF CURB TYPE AND THE CONFIGURATION OF THE UTILITY STRIP MAY VARY TO MEET EXISTING FIELD CONDITIONS AND ROADWAY GEOMETRICS PROVIDING THE DIMENSIONS AND SLOPES ARE AS NOTED.



THIS COMBINED (PARALLEL & PERPENDICULAR) DESIGN FOR ALTERATIONS CAN BE USED WITH ADJOINING BUFFER STRIP, LANDING AT BOTTOM OF TWO SLOPING SIDES WITH 60" X 60" MIN DIMENSIONS. THE SHORT PERPENDICULAR RUN TO THE STREET CAN BE PROTECTED BY A LANDSCAPED SETBACK OR CONNECTED TO THE SIDEWALK WITH A WARPED SURFACE.

SHEET 4 OF 4

CG-12 DETECTABLE WARNING SURFACE
TYPE C (PARALLEL & PERPENDICULAR) APPLICATION

REV. 7/05
203.07

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION
REFERENCE

105
502


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 03-2014

DATE: JUNE 11, 2014

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: WILLIAM SKRABAK, DEPUTY DIRECTOR, INFRASTRUCTURE AND ENVIRONMENTAL QUALITY, DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES 

SUBJECT: TREATMENT OF ROADWAY RUNOFF ASSOCIATED WITH DEVELOPMENT PROJECTS – GREEN SIDEWALKS DESIGN GUIDELINES

Effective immediately, the City of Alexandria will allow and encourage facilities to reduce and treat storm water runoff to be located within the public right-of-way, specifically in sidewalks. The intended locations, types of stormwater best management practice (BMP) facilities and maintenance responsibilities are set out in the accompanying design guidelines: 'Green Sidewalks'. The development of these guidelines was a multi-departmental City effort involving multiple divisions of Transportation and Environmental Services, Planning and Zoning and Recreation, Parks and Cultural Activities.

These guidelines are being published to aid the development community during design and construction of BMPs for treatment of storm water runoff from new public rights-of-way and/or portions of private property if meeting certain criteria. The primary focus is to provide a design that achieves maximum improvements in water quality and to guide the placement and aesthetics of above-grade BMPs. The guidelines are also intended for use on City right-of-way improvement projects.

A BMP is a facility for controlling the pollutants found in runoff from precipitation which, although commonly referred to as storm water, includes all rainfall which is traditionally channeled directly into storm drains.

Background

Despite 25 years of clean-up efforts the Chesapeake Bay watershed remains a challenged ecosystem. The tidal waters of the Bay continue to be enriched with excess nitrogen, phosphorus

and sediment. In response to this challenge and in accordance with the federal Clean Water Act, the EPA has directed the states contributing runoff to the Bay to develop and implement a “pollution diet”, also known as a Total Maximum Daily Load (TMDL). The keystone regulated pollutant continues to be phosphorus with nitrogen and sediment added to the required load reductions. To meet the reduction goals, Virginia developed a Watershed Implementation Plan (WIP).

As part of the WIP, the City has been working with other municipalities and the State of Virginia to determine Alexandria’s reduction requirements to meet the WIP goals. As one of the means to help achieve these reductions, a renewed emphasis on treating new roadways was promulgated with a Memo to Industry published on March 22, 2012 by the City’s Department of Transportation and Environmental Services (T&ES). An updated version of the Memo dated 04-2014 will accompany the release of the design guidelines. To help facilitate compliance with the new regulations, the guidelines specify that a minimum of the first half inch of runoff from any new public roadways created during development or redevelopment shall receive treatment from a stormwater BMP facility. The size of the facilities may need to be increased to accommodate the first inch of runoff if needed to meet the required pollution reduction targets.

Traditionally, treatment of impervious surfaces within the public right-of-way has been difficult to achieve due to their linear nature. Rights-of-way are, however, a significant portion of the impervious surface within the Chesapeake Bay watershed, particularly in highly urbanized areas such as Alexandria. Many of the recent Small Area Plans by the City have called for a ‘Green Streets’ approach which combines infrastructure and environmental improvements. The type of sidewalk BMPs advocated in these guidelines are one such example of this approach in helping the City achieve its environmental goals.

Applicability and Location

The surface-installed BMP systems outlined in these guidelines are intended to be used in areas of new development or re-development. They are envisioned in areas where significant new construction will take place (e.g. large scale buildings or facilities, or areas of large scale master plan implementation), that include either the construction of new roads and sidewalks, or significant rehabilitation of the existing right-of way facility. These guidelines lay out the framework for BMP facilities to be installed within the right-of-way. A determination as to the appropriateness of specific sites will occur during the small area plan, rezoning and design guideline process. Detailed design and application of these standards for specific sites will occur during the Development Special Use Permit (DSUP) or Development Site Plan (DSP) process.

Due to the anticipated size of surface-installed BMP facilities these guidelines are intended for the retro-fitting of existing streets only where technically feasible. Consideration should be given to the following: sufficient sidewalk space, local character and conflict with existing features and

utilities. BMPs of a more appropriate size and scale should be considered for these areas on a case by case basis.

Streetscape Design

The preferred BMP's for use in the public ROW are above-grade systems located within the sidewalk and which treat storm water runoff from adjacent roads and sidewalks

In general, a portion of these systems are visible at street level as landscape features within the sidewalk. In appearance they are very similar to a tree well or continuously planted strip, although they are depressed below sidewalk grade to allow for shallow ponding of water.

In areas with insufficient space, or other exceptional constraints, a below grade (ultra-urban) BMP system, or other BMP type shall be considered. In wider ROW settings, treatment within the median, or other locations may also be considered.

Maintenance

In all cases, the maintenance responsibilities will form part of a BMP Maintenance Agreement between the Developer/Applicant and the City. The Memo to Industry No. 04-2014 shall be the basis for agreements, although agreements for specific projects shall be made on an individual basis, either as part of the master planning or development site plan process.

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 04-16

DATE: ~~MARCH 17, 2016~~ JUNE 22, 2016 (UPDATED)

TO: DEVELOPERS, CONTRACTORS, ENGINEERS, ARCHITECTS,
SURVEYORS AND APPLICANTS

FROM: STEVE SINDIONG, ACTING DIVISION CHIEF, TRANSPORTATION
PLANNING, DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES *SS*

SUBJECT: MULTIFAMILY PARKING RATIOS AND THE CITY OF ALEXANDRIA
WALKABILITY INDEX

This memorandum is to provide information about the City's Walkability Index and outline when it can be used.

In April 2015, the City Council approved new parking requirements for multifamily dwellings. These requirements allow the base parking ratio to be lowered if certain credits are met. One such credit is for sites with a high degree of walkability to neighborhood services and uses. To measure this, the City has developed the Walkability Index which scores a site based on services and uses near the entrance to the building. At the time the Council approved the new requirements, the Walkability Index was not complete. Pursuant to the *Parking Standards for Multi-Family Residential Development Projects Guiding Document* (dated April 21, 2015), Walkscore was allowed to be used until the Walkability Index was complete.

The final version of the Walkability Index is now complete (see Attachment #1) and available to be used for new development. The Index has been updated from the version that was previously included in the April 2015 document. The *Guiding Document* has also been updated to include the final version of the chart and additional details about how to score a site. This document can be found online at: <http://www.alexandriava.gov/planning/info/default.aspx?id=76333>.

Projects that have submitted a Concept #2 Plan for review prior to ~~June~~ September 1, 2016 may use either Walkscore or the Walkability Index for this credit. Projects with a Concept #2 Plan submitted after ~~April~~ September 1, 2016 will be required to use the Walkability Index to count this credit.

For questions, please contact Katye North at katye.north@alexandriava.gov or 703.746.4139.

Walkability Index Use Types & Categories Chart

TABLE: USE TYPES & CATEGORIES

Category	Max. Points	Use or Service Type	0.25 mi. or less	0.25 - 0.5 mi.
Food Retail	15	Supermarket or grocery with produce section (min. 5,000 gross square footage)	15	5
Community-serving retail	20	Convenience Store	7	3
		Farmers Market (min. 9 months per year)	5	-
		Hardware store	5	-
		Pharmacy ¹	5	5
		Other retail ²	3	-
Services	20	Bank (not ATM)	5	-
		Family entertainment venue (e.g. theater, sports)	5	-
		Gym, health club, exercise studio	5	-
		Hair care	3	-
		Laundry, dry cleaner	5	-
		Restaurant, café, diner (excluding those with only drive-thru only service) ³	5	5
Civic and community facilities	35	Adult or senior care (licensed)	3	-
		Child care (licensed)	3	-
		Cultural arts facility (museum, performing arts)	5	-
		Education facility (e.g. K-12 school)	10	5
		Education facility (e.g. university, adult education center, vocational school, community college)	5	-
		Government office that serves public on-site	3	-
		Medical clinic or office that treats patients	3	-
		Place of worship	5	-
		Police or fire station	3	-
		Post office	5	-
		Public library	5	-
		Public park	10	5
		Community recreation center	3	-
		Social services center	3	-
Community anchor uses	10	Business office (100 or more FTE)	10	5

¹Pharmacies may be co-located with grocery stores

²Multiple retail uses may be counted if they are of a different type

³Only up to two restaurants may be counted

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 03-18

DATE: OCTOBER 5, 2018

TO: CONTRACTORS, DEVELOPERS, AND DESIGN PROFESSIONALS

FROM: HEATHER DIEZ, P.E., DEPUTY DIRECTOR, RIGHT OF WAY AND
DEVELOPMENT, TRANSPORTATION AND ENVIRONMENTAL
SERVICES *H.D.*
JEFFREY DUVAL, DEPUTY DIRECTOR, OPERATIONS, *JD*
TRANSPORTATION AND ENVIRONMENTAL SERVICES

SUBJECT: UPDATE TO MEMO 10-11 ON PAVING FOR PARK AND PLAZA AREAS
WHICH ARE TO BE CITY OWNED AND MAINTAINED

In 2011, the City of Alexandria allowed an expanded range of paving materials to be installed in newly constructed or redeveloped park and plaza areas which were to be owned and maintained by the City. The 2011 memo is hereby superseded and updated with this memo.

The Department of Transportation and Environmental Services (T&ES) has the responsibility for maintaining paved areas within City-owned parks and plaza areas. In order to allow greater flexibility in terms of design, performance and appearance, the City shall allow an expanded range of paving and installation techniques for these areas. This Memo sets out:

- the areas of City-owned land where the expanded range of paving materials and installation is permitted
- the range of paving allowable, and
- the specifications for installation.

Background

The City maintains standards for paving installations on City-owned land in order to ensure a level of performance of paved surfaces, to facilitate its maintenance operations, to allow visual coherence and appropriateness (for example in historic districts) and to offer a clear direction to developers, contractors, design professionals and homeowners who are developing in the City.

The existing City standards for paving, and where they are permitted, can be found here:

- City's Memo to Industry 05-08 Standards for Brick Sidewalks:
<http://alexandriava.gov/uploadedFiles/tes/info/StandardsforBrickSidewalks%20.pdf>
- Paving materials for areas of Mt. Vernon Ave (see streetscape section):
<http://alexandriava.gov/uploadedFiles/planning/info/MtVernonAvenueurbanDesignGuidelinescomplete1993.pdf>

Areas where is the expanded range of paving materials is permitted:

The expanded range of paving material and installation techniques set out in this Memo applies to areas of public parks or plazas which are maintained by the City's T&ES Department. It is intended that these areas are suitable for larger scale paving installation (either new areas of construction or areas previously developed) rather than localized or piecemeal installations, or repairs. The suitability of the site(s) for installing the expanded range of paving shall be agreed by the City to the satisfaction of the Directors of T&ES and P&Z (Planning & Zoning), and in the case of impact to City Parks, also to the satisfaction of the Director of RP&CA (Recreation, Parks & Cultural Activities).

City-owned Parks

The City parks covered by this Memo and applicable for the expanded range of paving are the publicly-owned parks identified on the City's website. The full list of Parks arranged in alphabetical order can be found here:

<https://www.alexandriava.gov/recreation/info/default.aspx?id=12342>

The actual boundaries applicable to the expanded range of paving materials shall be determined in the development review process to the satisfaction of the Directors of RP&CA, T&ES and P&Z.

City-owned Plazas

The plazas covered by this Memo and applicable for the expanded range of paving are the publicly-owned open areas which are primarily paved in character and frequently found in urban locations. Plazas shall be considered to be outside the public right-of-way.

The actual boundaries applicable to the expanded range of paving materials shall be determined in the development review process to the satisfaction of the Directors of T&ES and P&Z.

Areas that are not covered by this memo

Property that is privately-owned and maintained is not covered by this Memo, nor is City right of way including City sidewalks and drive aprons, which are covered under separate paving standards. For the relevant paving standards for sidewalks and drive aprons, see the Memo to Industry 05-08 (listed above).

Paving materials

The three paving unit types covered by this Memo shall be permitted in addition to the materials already allowed as City Standard paving materials. These paving units are made of precast concrete, and shall be utilized according to the following specifications:

Paving Unit Type A: Boardwalk/Plank Pavers

Product information:

Size (inches)	Product Name	Color	Finish	Edges	Manufacturer
4 x 12 x 3-1/8	Urban Stone	PG-13	Antique	Square ¹	Nitterhouse
4 x 12 x 3-1/8	Urban Stone	PG-29	Antique	Square ¹	Nitterhouse
4 x 12 x 3-1/8	Urban Stone	PG-32	Antique	Square ¹	Nitterhouse

¹ A square edge is the standard stock for these pavers. Due to the nature of square edges, a bituminous

setting in vehicular applications is recommended.

Paving Unit Type B: Standard “Brick Shape” Pavers

Product information:

Size (inches)	Product Name	Color	Finish	Edges	Manufacturer
4 x 8 x 2-3/8	Interlocking Paving Stones	Limestone Blend	Matte	Beveled	Nitterhouse
4 x 8 x 2-3/8 ²	Traditional Prest Brick	Charcoal	Natural	Beveled	Hanover
4 x 8 x 2-3/8 ²	Traditional Prest Brick	Chocolate/Tan Blend	Natural	Beveled	Hanover

² Size is nominal.

Manufacturer contact information:

Nitterhouse
859 Cleveland Ave
Chambersburg, PA 17201
(717) 261-2652
www.nitterhousemasonry.com

Hanover
5000 Hanover Road
Hanover, PA 17331
(800) 426-4242
www.hanoverpavers.com

Paving Installation

Installers shall utilize the manufacturer’s recommendations for pavers set on a sand setting bed or a bituminous setting bed. Either type of setting bed (sand or bituminous) shall be considered by the paving installer and by the City, with site specific conditions and paving performance taken into account in determining the correct type of setting bed installation.

The manufacturer specifications are intended to provide standards for installation and offer variations to suit both the proposed performance of the paving and the site conditions. Given the range of site conditions within the City, and the varying performance expected for specific projects, these installation specifications will not adequately cover all types of installation. The installation for a specific project shall be directed by a professional paving contractor or designer, and shall be approved through the development review process to the satisfaction of the Directors of T&ES and P&Z, and in the case of Park installations by the Director of RP&CA.

Maintenance

In any application where the paving materials in this memo are to be maintained by the City, the City has the right to select a replacement material to ensure a safe, functional pavement condition if these pavers become unavailable for any reason including, but not limited to, back-orders by the manufacturer or discontinuation of the material.

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 05-08

DATE: SEPTEMBER 15, 2008

TO: DEVELOPERS, CONTRACTORS, ENGINEERS, ARCHITECTS & SURVEYORS

FROM: EMILY A. BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING TRANSPORTATION AND ENVIRONMENTAL SERVICES *QAB*

SUBJECT: STANDARDS FOR BRICK SIDEWALKS IN NEW DEVELOPMENTS

Effective immediately, the City of Alexandria will require all brick sidewalks in new developments to be installed in a "running-bond" pattern. Diagonal "herringbone" and "basket-weave" patterns are no longer acceptable. The running bond shall be laid parallel to the street on a concrete or asphalt base as depicted on the approved construction drawings.

Pavers at all driveway approaches shall be mortar set with a 3/8 inch joint on a concrete base so that vehicle traffic will not displace the pavers. These bricks shall be set perpendicular to the street because this is a slightly stronger bond and will resist the movement of rotating tires.

A stack bond header course shall be utilized at the back of curbs and around tree wells and/or planters. All tree wells without tree grates shall be surrounded by galvanized metal angles so that the bricks are not displaced. These changes will greatly reduce long-term maintenance required by the City.

The City typically stocks Old Virginia #24 (full range) bricks manufactured by Old Virginia Brick Company (www.oldvirginiabrick.com/brick/wmp_col_full_rng.html). The City also allows Calvert #237 (in Old Town), red pavers, Old Sanible Range and King William Brick. Please contact the Construction & Inspection Division at (703)519-6584 for other allowable brick types or to have products included in the list of acceptable brick.


This policy includes projects that are released and/or currently under construction. If you should have any questions, please contact Lucky Stokes, Chief, Construction & Inspection Division at (703) 519-6585.

City of Alexandria, Virginia

MEMORANDUM TO INDUSTRY NO. 01-13

DATE: MARCH 8, 2013

TO: HOMEOWNERS, CONTRACTORS, DEVELOPERS AND DESIGN PROFESSIONALS

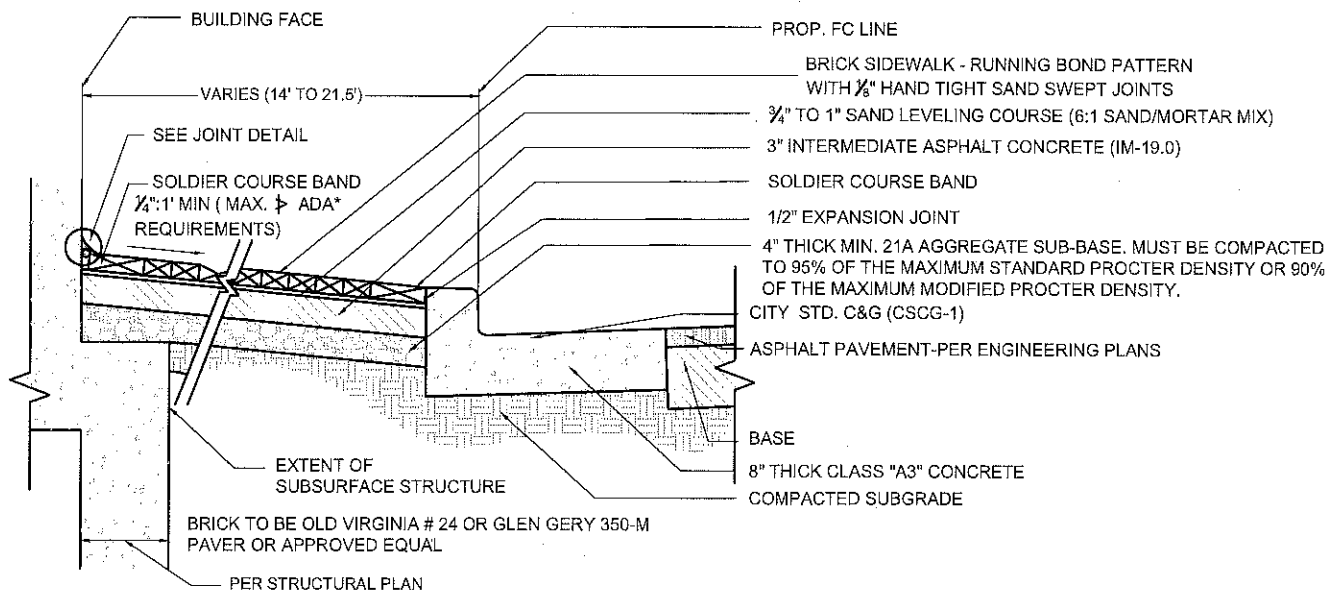
FROM: EMILY A. BAKER, P.E., CITY ENGINEER 
TRANSPORTATION & ENVIRONMENTAL SERVICES

SUBJECT: STANDARD DETAIL FOR BRICK SIDEWALK AT SUBSURFACE STRUCTURE.

It has been observed that the brick sidewalks in Carlyle development have failed due to unequal settlement where the brick sidewalks are constructed adjacent to the building face and over subsurface structures/ garages. The main reason for the failure of these sidewalks is attributed to the rain water seeping down the wall surface, then under the sidewalks, washing the fines off, and creating voids beneath the sidewalk. The attached detail CSSW-2 is developed to mitigate this problem. Effective immediately, the sidewalk /building face joint and sidewalk shall be installed in accordance with this standard detail.

If you have any questions or require additional information, please contact Dr. S.P. Singh, P.E. at 703-746-4062.

Attachment: Brick Sidewalk at Subsurface Structure Detail: CSSW-2



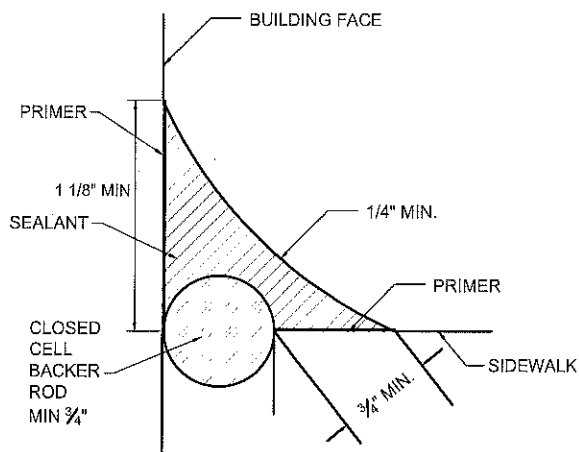
*ADA: AMERICAN WITH DISABILITY ACT.

NOTES:

1. ALL STRUCTURAL ITEMS TO CONFORM TO 2009 IBC REQUIREMENTS.
2. PRIOR TO CONSTRUCTION ALL STRUCTURAL CROSS SECTIONS SHALL BE REVIEWED BY A QUALIFIED STRUCTURAL AND/OR GEOTECHNICAL ENGINEER, AND MODIFIED AS NECESSARY BASED ON THE SITE SPECIFIC GEOTECHNICAL REPORT.

NOTES:

1. SEALANT SHALL BE ASTM C920 (CURRENT STANDARD), TYPE M, GRADE NS, CLASS 100%, USE T1.
2. CONTRACTOR SHALL CLEAN THE SUBSTRATES FREE OF OIL AND WATER WITH COMPRESSED AIR, OR BRUSHING, SAND BLASTING, GRINDING, OR SAWING AND APPLY PRIMER PER THE RECOMMENDATIONS OF THE SEALANT'S MANUFACTURER.
3. SEALANT MUST BE INSTALLED PER ASTM C1193, AS MODIFIED.



JOINT DETAIL
(REF.: GDBEC)

(N.T.S.)

BRICK SIDEWALK AT SUBSURFACE STRUCTURE

March 8, 2015
DATE

[Signature]
APPROVED
3/8/13
DATE

DEPARTMENT OF TRANSPORTATION &
ENVIRONMENTAL SERVICES
ALEXANDRIA VIRGINIA

CSSW-2
PAGE X

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 01-19

DATE: JANUARY 16, 2019

TO: DEVELOPERS, ARCHITECTS, SURVEYORS, & ENGINEERS

FROM: ^{H.D.} HEATHER DIEZ, DEPUTY DIRECTOR, DEPARTMENT OF TRANSPORTATION
AND ENVIRONMENTAL SERVICES

SUBJECT: PARKING MANAGEMENT PLAN TEMPLATE

As part of the site plan review process for many major developments in the City of Alexandria, developers are required to submit a Parking Management Plan (PMP) for review with the Final Site Plan Submission for approval by the City's Departments of Planning and Zoning (P&Z) and Transportation and Environmental Services (T&ES). PMPs are intended to promote thoughtful and effective parking management practices and to confirm that new developments are managed in a way that is consistent with the transportation, mobility, and land use goals of the City of Alexandria.

T&ES has developed a City of Alexandria Parking Management Plan Template to provide guidance for the development and submittal of PMPs. The purpose of this template is to assist applicants in the preparation of PMPs, to promote more consistent PMP submittals in order to streamline approvals, and to have a more efficient City review process with fewer required revisions. The standard condition will be updated to reference this template and to include in DSUP/DSP conditions as appropriate.

FORMATTING AND SUBMISSION GUIDELINES

Parking Management Plans should be submitted in report format following the Parking Management Plan Template. Site plans, figures, and analyses may be provided as attachments to the main report as appropriate. PMP documents should be submitted electronically to the P&Z project manager at the time of the Final Site Plan submittal. Staff reserves the right to request a draft PMP with the Preliminary Plan submission, depending of the level of complexity for the parking.

ATTACHMENT:

- 1) City of Alexandria Parking Management Plan Template
- 2) Updated standard condition for Parking Management Plans

ATTACHMENT 1: City of Alexandria Parking Management Plan Template

City of Alexandria Parking Management Plan (PMP) Template

For more information on the Parking Management Plan (PMP) template, see Alexandria Memorandum to Industry No. 01-19. Parking Management Plans should be submitted in report format. It is recommended the report generally follow the format shown below. Site plans, figures, and analyses may be provided as attachments to the main report as appropriate. The complete PMP should be submitted electronically to the P&Z project manager at the time of the Final Site Plan submittal.

Items Required for All PMPs:

1. Cover Page

Name of project, site plan number, date, name of report preparer.

2. Narrative

Provide a general project summary and a narrative with descriptions of the proposed development and parking facilities.

3. Site Plans

Provide on-site architectural floor plans or surface lot plans on which vehicle parking and/or parking access are located. Include the following graphical elements where applicable:

- a) Parking space dimensions and labeled as compact or standard
- b) Distribution of compact/standard/accessible spaces
- c) Parking space allocation (i.e. employee parking, resident parking, short term/visitor parking, carpool/vanpool parking, electric vehicle parking)
- d) Drive aisle width dimensions
- e) Pedestrian access points and walkways
- f) Bicycle access points and bicycle parking locations
- g) Traffic flow arrows
- h) Vehicle queuing lanes
- i) Location of access/control gates at entry points
- j) Location of access/control gates at internal entry points (e.g. between retail and residential level)
- k) Location of overhead doors
- l) Location of pay stations and any other access, revenue control, or automated parking control equipment.
- m) Outline of wayfinding signage plan for all users of all modes of transportation

4. Management Details

Provide a written explanation of how the parking facility is anticipated to be managed, operated, and enforced, including but not limited to:

- a) Facility staffing needs for peak, non-peak, and overnight hours
- b) Access and accommodation for various user groups
- c) Permit issuing
- d) Enforcement
- e) Hours of operation

5. Pricing and Payment Details

Provide an explanation and summary of the anticipated approach to parking pricing/rate structure as well as payment and validation options.

Items Required Based on Context:**6. Peak Period Contingency Plan**

7. When applicable, provide a contingency plan detailing how parking will be managed during peak periods and events, particularly for churches, auditoriums, or other gathering spaces. Curbside Management Plan

When applicable, provide a curbside management plan demonstrating how pick-up/drop-off and any other curbside uses will function.

8. Off-site Agreements

When applicable, provide any off-site agreements, detailing the number of spaces leased, days/hours leased, and total capacity analysis of partner parking facilities.

9. Shared Parking Analysis and Management

When applicable, provide a shared parking analysis and details about the management of spaces.

10. Valet Parking Plan

When applicable, provide a valet parking plan, to include:

- a) Brief narrative description of how the valet will function
- b) Diagram showing how cars will be shifted in and out of spaces at peak usage.
- c) Contact information for valet operator or potential valet operators
- d) Location of receiving garage/lot and number of spaces leased off-site (if applicable)
- e) Lease agreement for off-site spaces (if applicable)

11. Queuing Analysis

When applicable, provide a queuing analysis at the garage/lot entrances. The queuing analysis shall demonstrate that no queuing will occur in the public right-of-way based on 90% probability. The queuing analysis shall demonstrate that any internal queuing based on 90% probability. The analysis should factor in delay associated with control devices. An internal stacking diagram shall be provided.

ATTACHMENT 2: Updated Standard Condition

Development Standard Conditions (in “Construction Management” section)

Revised Condition:

1. Provide a Parking Management Plan with the Final Site Plan submission. The Parking Management Plan shall be approved by the Departments of P&Z and T&ES prior to the release of the Final Site Plan and comply with the requirements of the Parking Management Plan Template provided in Memo to Industry 01-19.

New Condition:

1. Provide a Parking Management Plan with the Final Site Plan submission. The Parking Management Plan shall be approved by the Departments of P&Z and T&ES prior to the release of the Final Site Plan and comply with the requirements of the Parking Management Plan Template provided in Memo to Industry 01-19.*(P&Z)(T&ES)

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 07-14

DATE: JUNE 20, 2014 [EFFECTIVE DATE JULY 1, 2014]

TO: DEVELOPERS, ARCHITECTS, ENGINEERS, AND SURVEYORS

FROM: WILLIAM SKRABAK, DEPUTY DIRECTOR, INFRASTRUCTURE AND ENVIRONMENTAL QUALITY, TRANSPORTATION AND ENVIRONMENTAL SERVICES *WS*

SUBJECT: DEVELOPMENT REQUIREMENTS FOR THE COMBINED SEWER SERVICE AREA

DESCRIPTION OF THE COMBINED SEWER SYSTEM (CSS)

The City of Alexandria (City) has a combined sewer system (CSS) comprising of about 38 miles of pipes serving an area of about 540 acres, which is primarily located east of the railroad corridor and centered in Old Town, Alexandria (Figure 1). The City's CSS is divided into three separate CSS areas: King and West, Royal, and Pendleton as shown on the figure. During dry weather, municipal wastewater (sanitary sewage) collected from homes and business in these CSS areas is conveyed to the Alexandria Renew Enterprises (AlexRenew) Water Resource Recovery Facility (WRRF). However, during wet weather periods stormwater runoff is introduced to the pipe network and the capacity of the CSS may be exceeded. The excess flow, which is a combination of stormwater runoff and sanitary sewage, is discharged directly into Hunting Creek, Hooff's Run or Oronoco Bay; that eventually discharge to the Potomac River through the City's four permitted combined sewer outfalls. These outfalls are regulated under the City's Virginia Pollutant Discharge Elimination System (VPDES) Permit as point source discharges of combined sewer overflow (CSO) from the City's CSS: Pendleton Street CSO (Outfall 001), Royal Street CSO (Outfall 002), and King and West/Hooff's Run (Outfall 003 and Outfall 004).

PURPOSE

A Total Maximum Daily Load (TMDL) has been established for the Hunting Creek watershed that includes Hooff's Run for *E. coli* bacteria, which is found in both sanitary sewage and stormwater runoff. The TMDL calls for sizable reductions in the volume of CSO discharged from CSO Outfalls 002, 003 and 004.

The purpose of this Memorandum to Industry is to present the City's CSS Management Policy related to development and redevelopment in the combined sewer area. This policy has been developed to minimize the environmental impacts of CSOs on the receiving waters and to comply with the City's VPDES permit effective August 23, 2013. This memo provides a path for developers to follow for projects located in the CSS area. The requirements related to development/redevelopment projects in the CSS are presented below.

EXCEPTIONS

The following exceptions only apply to the CSS Management Policy stated in this Memorandum to Industry. All other requirements related to development/redevelopment shall be adhered to.

1. Single family residence not part of a larger redevelopment project.
2. Addition to an existing property that does not increase the amount of sanitary sewage generated.

CSS MANAGEMENT POLICY REQUIREMENTS

The goal of the Combined Sewer System Management Policy is to minimize the impact of combined sewer discharges to the environment. All new development and/or redevelopment projects (not listed in Exceptions) shall be required to implement the Combined Sewer System Management Policy. All applicants will be required to provide onsite separation and implement Option A when connection to a fully separate sewer system is available. Options B and C will be available if separation is not available or

feasible as determined by the Director of Transportation and Environmental Services (T&ES). The requirements are as follows:

Option A (preferred option):

- All sanitary sewage and/or stormwater from the redevelopment site shall discharge to fully separated sewer systems (i.e. does not discharge to a combined sewer downstream) if such systems are available as determined by the Director of T&ES. If the developer is able to separate additional offsite areas (either upstream or downstream from the project site), then a credit will be applied to the sewer connection fees for the number of offsite units (or non-residential equivalent) separated as determined by the Director of T&ES). If this difference is greater than the sewer connection fee, then the sewer connection fee will be waived and no addition credit or payment will be provided by the City.

Option B (if Option A is not achievable):

- Retain 50 percent of the annual stormwater runoff generated from the development site onsite. A number of alternatives may be implemented to meet this requirement including installation of green roofs, permeable pavement, and/or bioretention. If soil conditions onsite renders this option technically infeasible, supporting documentation to the Director of T&ES must be provided.

Option C (if Option A or B is not achievable):

- Provide for offsite separation of sanitary and/or storm sewers to the satisfaction of the Director of T&ES. The number of units (or non-residential equivalent) separated must be at least the same as the proposed development. There may be multiple options for offsite sanitary sewer separation. City Staff will work with the developer (or developer's representative) to determine which option is most practicable; OR
- Pay a contribution in lieu of offsite separation:
 - Contribution = Stormwater Fee + Sanitary Fee
 - Stormwater Fee = \$200,000 x total parcel area in acres

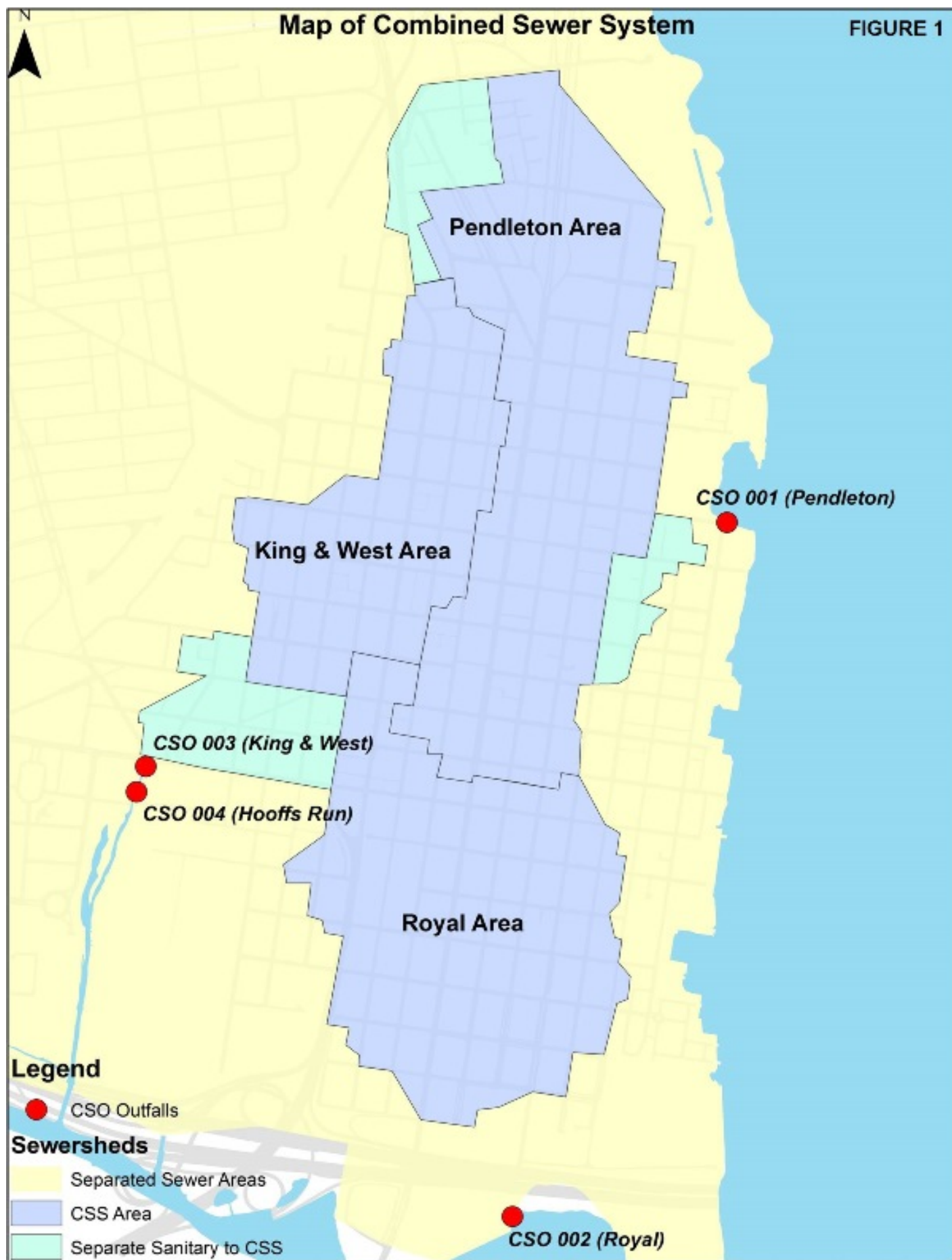
- Sanitary Fee = \$1.50 x peak wastewater flow in gallons**
***Peak wastewater flow calculated using flow factors from the Sanitary Sewer Adequate Outfall Memo to Industry No. 06-14*

It should be noted that the contributions do not apply to areas served by separate sanitary or stormwater systems. For instance, if a redevelopment project is located in the CSS area where the sanitary sewage is connected to a combined sewer, but the stormwater has already been fully separated, then the applicant shall only be required to pay the sanitary fee.

FOR ADDITIONAL INFORMATION

If you have any questions about the CSS Management Policy, please contact Lalit Sharma, Division Chief, Stormwater and Sanitary Division, T&ES at 703-746-4065.

Attachments: Figure 1. Map of Combined Sewer System



City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 06-14

DATE: JUNE 20, 2014 [EFFECTIVE DATE JULY 1, 2014]

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: WILLIAM SKRABAK, DEPUTY DIRECTOR, INFRASTRUCTURE AND ENVIRONMENTAL SERVICES, TRANSPORTATION AND ENVIRONMENTAL SERVICES *W.S.*

SUBJECT: NEW SANITARY SEWER CONNECTION AND ADEQUATE OUTFALL ANALYSIS – UPDATED

This memo supersedes Memorandum to Industry No. 02-07, dated June 1, 2007, and gives additional guidance for performing adequate sanitary sewer outfall computations with respect to existing and proposed sanitary sewer flows.

The City of Alexandria (City) continues to experience rapid growth with new development and/or redevelopment resulting in increased building and population densities. As part of the City's Sanitary Sewer Master Plan, the City has conducted sanitary sewer studies to identify the issues of increased sanitary flow in the collector sewers and interceptor sewers serving the City. Based on the results of these studies, applicants for new development and/or redevelopment shall provide for the sanitary sewer improvements, information and analyses, as described herein, to the satisfaction of the Director of Transportation and Environmental Services (T&ES) if the additional estimated peak wastewater flow exceeds 10,000 gallons per day (0.01 MGD) or 0.0155 cfs. The following information shall be submitted to the Director of T&ES with the submission of the **Preliminary Site Plan** (or as part of Concept Plan if

warranted and as determined by T&ES staff) and addressed to the satisfaction of the Director of T&ES:

1. Applicants for development/redevelopment shall provide adequate sanitary sewer outfall analysis, as generally described below, sufficient to determine existing and future flows in the City-owned sewers that are served by the development/redevelopment project. The sanitary sewer adequate outfall analysis shall be completed up to a trunk sewer downstream with a minimum diameter of 24-inches or to a point as directed by T&ES staff.
2. The applicant shall provide an estimate of the average day and peak wastewater flow discharged upstream and downstream of the development site under existing conditions and the contribution of sanitary flow from the proposed development site using the factors described below.

a. Average design flows* :

- | | |
|---|-------------------|
| i. Single Family Home/Townhouse | 350 gpd/unit |
| ii. Multi-Family (Condominium, Apartment) | 300 gpd/unit |
| iii. Office / Retail | 200 gpd/1000 sqft |
| iv. Hotel | 130 gpd/room |

* The average day design flows include the infiltration and inflow (I/I) contribution.

For any other type of development not covered above; the applicant shall obtain guidance from the Director of T&ES as to what flow factor(s) shall be used to perform adequate sanitary sewer outfall analysis.

- b. The sanitary sewers shall be designed for peak flow using a peaking factor of 4 applied to the average flow.
- c. At the discretion of T&ES staff, existing conditions peak flows, based on long-term monitoring and/or sewer modeling, may be available to the applicant for use

in determining sanitary sewer capacity.

d. Short-term temporary flow monitoring or water meter data may not be used in lieu of computing existing flows. Long-term monitoring may be used subject to the approval of the Director of T&ES.

3. The following GIS information is available for the applicant to use when computing existing and proposed sanitary sewer average and peak flows:

a. Sanitary sewer layer – this shows the layout of the existing sanitary sewers in order to determine the connections to the sanitary sewer. Portions of the sanitary sewer layer have survey information including pipe diameter, pipe material, manhole rim elevations, and pipe slope. If survey information is not included in the GIS layer (i.e. survey fields are null), then the applicant, for determining adequate outfall, shall be responsible for obtaining field measurements and providing this to the City as part of the analysis.

b. Building layer – this includes whether or not the existing building is residential, non-residential or mixed use, along with the number of residential units or non-residential floor area such that existing sanitary sewer flows may be estimated.

c. The City makes available its GIS data via a DVD for purchase. More information can be found on the City's website at:

<http://alexandriava.gov/gis/info/default.aspx?id=7674>

d. Questions related to sewer connectivity, sewershed delineation, building layer data, etc. may be directed to T&ES staff.

4. The applicant shall use the criteria established by the Engineers and Surveyors (ESI) Institute, as shown on the ESI Checklist, where applicable, including Manning's roughness coefficients and minimum pipe slopes. All sewers shall be designed to flow by gravity such that the hydraulic grade line (HGL) is contained within the crown of the pipe.

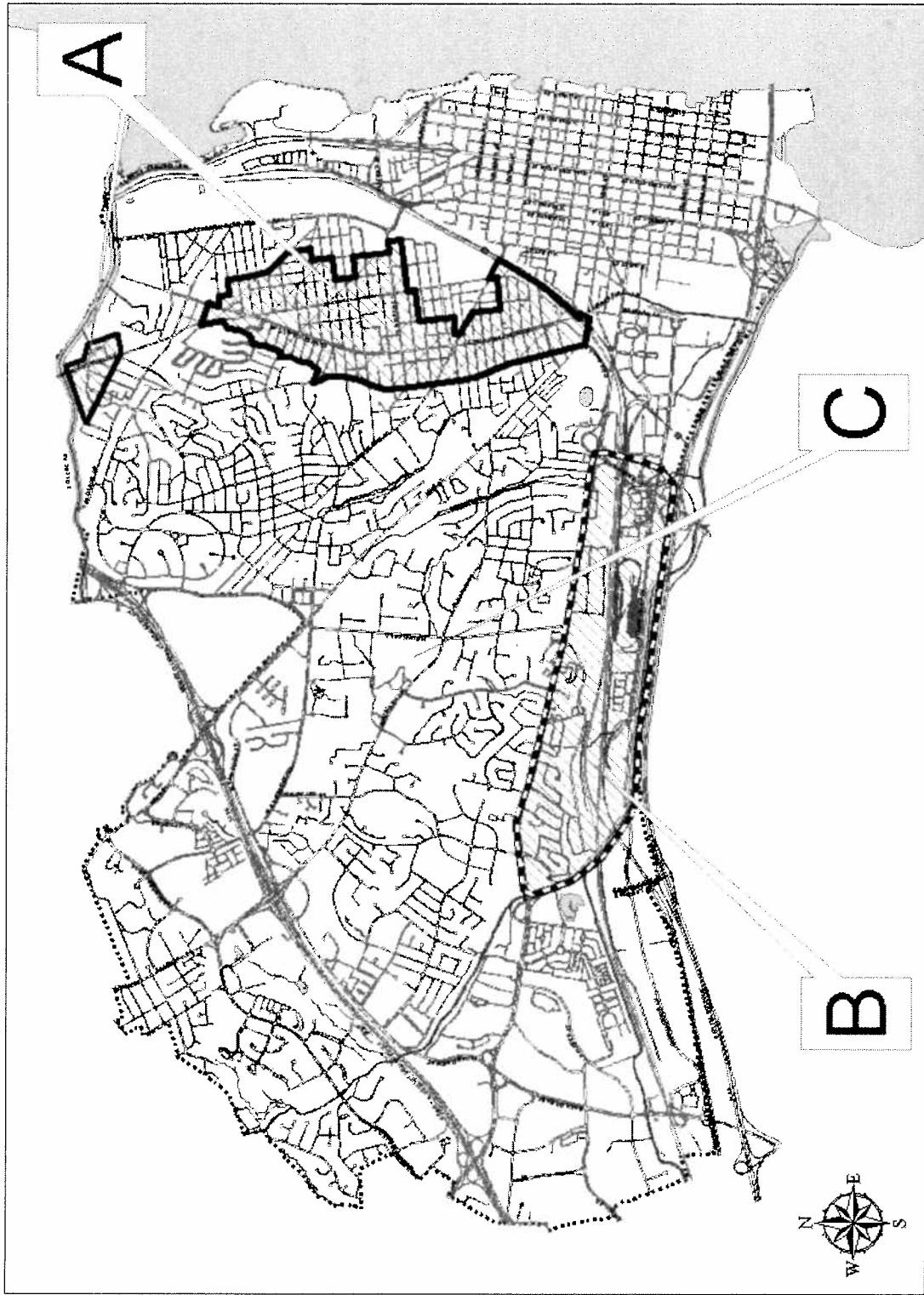
5. The applicant shall provide all the measured data and calculations on the adequate sanitary sewer outfall analysis on the plans for review by T&ES staff. In addition, the applicant is required to show the following:
- a. Delineation of the sanitary sewershed that shows the existing sanitary sewers and all connections upstream of the proposed development and all connections that tie-in downstream of the proposed development to the sewer specified by T&ES staff.
 - b. Calculation of all existing average and peak flows just upstream of the proposed development showing total number of residential units and type and total non-residential area (in square feet) and type. If existing flows have been provided by T&ES staff, than just the peak flow is required. Note that estimation of sewer capacity is not required for sewers upstream of the proposed development.
 - c. Calculation of existing and proposed sanitary sewer average and peak flows from the proposed development site.
 - d. Calculation of all existing average and peak flows downstream of the proposed development. If existing peak flows are provided by T&ES staff, than just the peak flows are required. Incoming sanitary sewer flows shall be computed at each manhole starting at the proposed development and continuing downstream as specified above. Note that estimation of sewer capacity is not required on sewers that do not serve or are not impacted by the proposed development site.
 - e. Summary table showing pipe capacity, pipe diameters, material, Manning's roughness coefficients, slopes, and flows utilized in estimating sewer capacity shall be included.
 - f. In cases where there is not sufficient capacity, based on Manning's equation, the applicant shall be required to include HGL computations and a profile

showing the HGL. Starting tailwater elevations will be provided by T&ES staff.

6. If adequate sewer capacity does not exist, based on Manning's equation and the HGL being above the crown of the pipe, then the applicant shall be responsible for providing the required upgrades to accommodate the flows to the satisfaction of the Director of T&ES. The applicant may be required to do one of the following:
 - a. Construct the required sanitary sewer infrastructure in order to accommodate the development project subject to the approval of and to the satisfaction of the Director of T&ES. The required infrastructure shall meet ultimate build-out conditions as determined by T&ES staff. In the cases where the required infrastructure will benefit other planned and/or anticipated development, a credit towards the sewer connection fee shall be available as per the City's Code of Ordinances Section 5-6-25.1(b).
 - b. If the required sanitary sewer infrastructure is being implemented as part of the City's Capital Improvement Program, then the applicant shall be required to pay a fee based on the cost of the infrastructure and the applicant's share of that cost. The cost share shall be determined by the Director of T&ES.
7. Sanitary sewer systems that serve over 400 people require the approval of the Virginia Department of Environmental Quality (VDEQ). Therefore, the applicant shall comply with all the regulatory requirements of the State of Virginia.
8. No foundation drain, basement drain, or stairwell basement access drain or other non-sanitary connection shall be connected to the sanitary sewer system.

9. In the areas A and B shown in the attached map, the sanitary sewer plumbing fixtures and drains located below the first floor (including parking structures) shall have in-structure or on-site pumped discharge to the City's gravity collection system. The installation of plumbing fixtures throughout the City shall be governed by location. The pumped facilities shall be provided with a standby source of power (i.e. battery or generator). The property owner shall be responsible for the ownership, capital, maintenance and operation of the pumps and appurtenances.

If you have any questions, please contact Maurice Daly, Division Chief, Infrastructure and Right-of-Way Division, T&ES at (703) 746-4045.




City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 05-18

DATE: APRIL 4, 2018

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: WILLIAM SKRABAK, DEPUTY DIRECTOR, INFRASTRUCTURE AND ENVIRONMENTAL QUALITY, TRANSPORTATION AND ENVIRONMENTAL SERVICES 

SUBJECT: REVISION TO THE SANITARY SEWER CONNECTION FEE ORDINANCE SECTION 5-6-25.1

On October 14, 2017, City Council passed an ordinance to amend and reordain Section 5-6-25.1 of the City Code of Alexandria to create a phase-in period for sewer connection fees associated with conversions of existing buildings that increase the number of units or change use, such as from a change from non-residential use to residential use. The proposed change would provide a process for fees assessed at final site plan approval (or at the issuance of building permits if a final site plan is not required) using a two-step phase-in period as follows:

- For conversions with approvals or permits granted from May 18, 2013 to June 30, 2018: a sewer connection fee of 60 percent of the City Code stipulated amount shall be applied; and
- For conversions with approvals or permits granted from July 1, 2018 to June 30, 2019: a sewer connection fee of 80 percent of the City Code stipulated amount shall be applied.

As of July 1, 2019, the full amount of the fee calculated pursuant to City Code Section 5-6-25.1(a)(7)(i) or (a)(7)(ii) will be assessed.

An example calculation for a project approved during the first phase (as set forth in Section 5-6-25.1(a)(7)(iii)) is provided below using the fees stipulated in Memorandum to Industry 03-17:

Sewer Connection Fee Calculation – Conversion Example (Approval Between May 18, 2013 and June 30, 2018):

Existing use – 600,000 square foot office building with a 6-inch water meter
Proposed use – 525 multi-family residential units

Sewer connection credit for existing use = \$295,256

Sewer connection fee for proposed use = $0.6 \times 525 \text{ units} \times \$7,973 \text{ per unit} = \$2,511,495$

Total Sewer Connection Fee = $2,511,495 - \$295,256 = \underline{\$2,216,239}$

In July 2016, a Memo to Industry was issued that clarified the existing City Code with respect to changes in use. The fee shall be calculated based on the net increase in “units” or “usage” (where number of units was not applicable) between the existing and proposed uses. In this case “usage” refers to the use of the property, and the connection fee is calculated by subtracting the fee associated with the existing use from the fee associated with the proposed use.

Please note that this fee structure does not apply to new construction or teardowns of existing structures. With respect to “teardowns”, a credit equal to 50 percent for the existing use can be applied to the connection fee for the proposed use. For conversion projects that also include the addition of new buildings, the sewer connection fee for the construction of the new structures shall be assessed separately from the fee assessed for the conversion of any existing buildings.

If you have any questions, please contact Lalit Sharma, P.E., Division Chief, Sanitary Infrastructure Division at 703.746.4072.


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 03-17

DATE: MAY 31, 2017

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: LISA JAATINEN, P.E., ACTING DIVISION CHIEF, 
INFRASTRUCTURE/RIGHT OF WAY DIVISION, TRANSPORTATION AND
ENVIRONMENTAL SERVICES

SUBJECT: SANITARY SEWER CONNECTION FEES FOR FY2018
CITY CODE SECTION 5-6-25.1

Effective for Final Site Plans and Grading Plans submitted after July 1, 2017, the sanitary sewer connection fees are hereby increased as outlined in the revised fee schedule below. The submission date shall be determined by the date that the Final 1 Site Plan or initial Grading Plan was received. For Site Plans, please note that the date the plan was submitted to ESI for Minimum Submission Review is not the same as the Final 1 Submission Date.

Tear-down credits: For connections that involve the removal of an existing structure with an existing tap, a credit will be provided, equal to 50 percent of the current fee that would be applied to the structure(s) being removed. For mixed use properties, the credit will be based on the sum of the residential credit and nonresidential credit, in accordance with Section 5-6-25.1 of the City Code. The credit shall only apply to properties removed or demolished not longer than three years prior to the submission of the final site plan or grading plan for the new structure.

For FY 2017: July 1, 2017 through June 30, 2018:

- **\$8,859.00;** single-family detached, semi-detached, duplex or townhouse
- **\$7,973.00;** per dwelling unit; multi-family building, i.e. condominium apartments (90% of Single-family rate)
- **\$7,973.00;** per unit; hotel/motel (90% of Single-family rate)

Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property. The fee chart is located on Page 2.

Fee Chart for Nonresidential Property

<i>Meter Size (inches)</i>	<i>Maximum Capacity (GPM)</i>	<i>3/4" Meter Equivalent</i>	<i>Fee</i>
3/4 or smaller	30	1.00	\$8,859
1	50	1.67	\$14,794
1 1/2	100	3.33	\$29,499
2	160	5.33	\$47,216
3	320	10.76	\$95,318
4	500	16.67	\$147,672
6	1000	33.33	\$295,256
8	1600	53.33	\$472,426
10	2300	76.67	\$679,184

The sanitary sewer connection fee increases reflect the requirements of City Code Section 5-6-25.1. This section of the City Code was amended by the Alexandria City Council on May 18, 2013. On July 1 of fiscal years 2019 and beyond, these fees shall be increased by the annual rate of inflation as determined by the CPI-U for the Washington, DC-MD-VA-WVA Combined Statistical Area. For Fiscal Year 2018 an increase of 1.3% was used based on the CPI-U rate from March 2016 to March 2017.

If you have any questions, please contact me or the Development Coordinator, at (703)-746-4064.

City of Alexandria, Virginia

MEMORANDUM TO INDUSTRY NO. 01-11

DATE: FEBRUARY 18, 2011

TO: HOMEOWNERS, CONTRACTORS, DEVELOPERS AND DESIGN PROFESSIONALS

FROM: EMILY A. BAKER, P.E., CITY ENGINEER *EAB*
TRANSPORTATION & ENVIRONMENTAL SERVICES

SUBJECT: SANITARY SEWER LATERAL CONNECTIONS AND PERMITTING

Effective immediately, a Sanitary Sewer Lateral Connection Permit shall be required from the Department of Transportation & Environmental Services to connect sanitary sewer laterals to the City's sanitary sewer mains. This permit will cover both the lateral connection and any associated excavation within the public right-of-way, a separate excavation permit will not be required. The current excavation permit fee of \$200 will be applied, there will be no additional permit fee for the lateral connection. Any other applicable permits, such as lane or sidewalk closures and reserved parking, will still be required with the applicable fees. The permits may be obtained from the Transportation & Environmental Services Permit Office located in Room 4130 of City Hall, 301 King Street, Alexandria, VA 22314.

In addition, the City's Sanitary Sewer Lateral Connection detail CSLC-1 is hereby replaced with CSLC-1A and CSLC-1B details attached to this Memorandum to Industry. In accordance with these details, the sanitary sewer laterals shall be connected to the existing sanitary sewers through a manufactured "Y" or "T" or an approved sewer saddle as specified in these standards.

All installations of sanitary sewer lateral connections must be inspected by a T&ES inspector prior to backfilling.

All new installations and/or reinstallations of sanitary sewer laterals both on public and private properties and in the public right of way in the City of Alexandria shall be provided with 3" and 6" wide 5 mil overall thickness Detectable Underground Warning Tapes (DUWT) per the requirements of Memorandum to Industry 02-09 dated December 3, 2009.

If you have any questions or require additional information, please contact Dr. S.P. Singh, P.E. at 703-746-4062 or the Construction & Inspection office at 703-746-4035.

Attachments: 1. Permit Application for Sanitary Sewer Lateral Connection
2. Sanitary Sewer Lateral Connection Details: CSLC-1A and CSLC-1B

ATTACHMENTS



APPLICATION FOR SANITARY SEWER LATERAL CONNECTION

CITY OF ALEXANDRIA, VIRGINIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
301 KING STREET, ROOM 4130
ALEXANDRIA, VA 22314
703-746-4035 (office); 703-838-6438 (fax)
alexandriava.gov

Job Address: _____
Contractor: _____
Mailing Address: _____
Applicant Name: _____ Email: _____
Office Telephone Number: _____ Cell #: _____

Utility Company: _____
Mailing Address: _____
Utility Company Contact Person: _____
Field Supervisor/Foreman: _____ Telephone #: _____
Cell #: _____ Email: _____

Type of Excavation: ☐ Sidewalk: ☐ Concrete ☐ Brick ☐ Utility/Grass Strip
☐ Driveway Apron: ☐ Concrete ☐ Brick ☐ Street
☐ Median: ☐ Concrete ☐ Brick

Size of Excavation: Length _____ Width _____
Size of Sanitary Sewer Tap: _____ in.
Invert Depth at Connection: _____ ft.
Distance From The Nearest Manhole: _____ ft.

Description of Work: _____

Work Area to Include: ☐ Lane Closure; ☐ Street Closure; ☐ Sidewalk Closure; ☐ Parking Spaces: Total No. _____

Begin Date: _____ End Date: _____
Requested Work Hours: _____

Applicant Must Provide: Sketch showing work to be performed and a maintenance of traffic (MOT) plan. The MOT must be in compliance with the current version of the Virginia Work Area Protection Manual. (Note: Incomplete applications cannot be processed and will be returned.)

ALL DRAWINGS MUST BE A MINIMUM SIZE OF 8-1/2" X 11" AND MUST BE LEGIBLE, AND CONTAIN ALL REQUIRED INFORMATION. THREE (3) COPIES OF EACH DRAWING IS REQUIRED.

THE APPLICANT IS SOLELY RESPONSIBLE TO ADHERE TO ALL CONDITIONS ASSOCIATED WITH THIS PERMIT.

Applicant Signature: _____ Date: _____

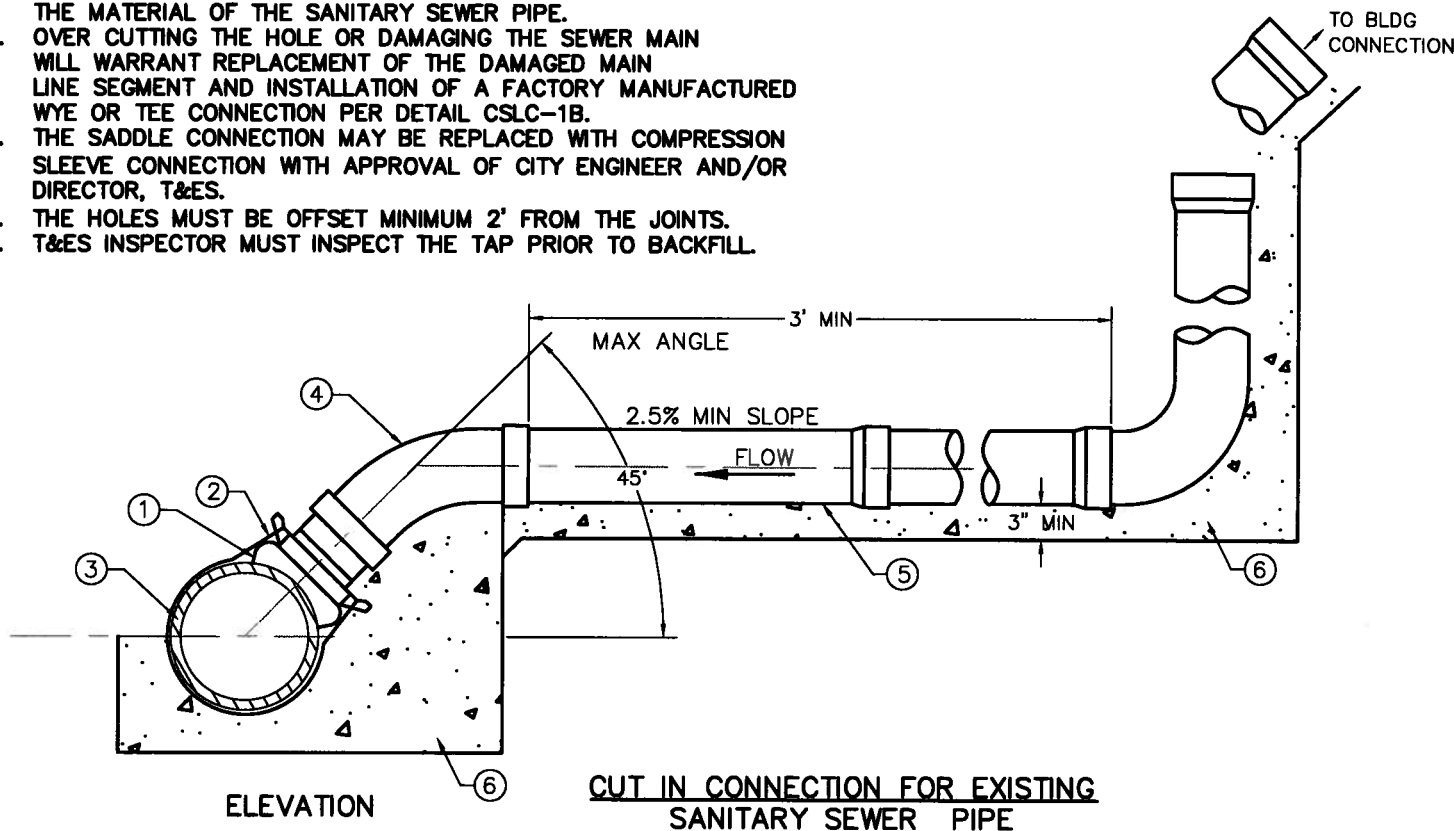
FOR OFFICE USE ONLY

Permit Number: _____ Previous Permit Number: _____
Insurance Expiration Date: _____ Bond Required: ☐ Yes; ☐ No; Amount: _____
Tap Fee Required: ☐ Yes; ☐ No; Tap Fee Paid: ☐ Yes; ☐ No

NOTES:

1. CONNECTION TO A PUBLIC SANITARY SEWER SHALL REQUIRE A SEWER LATERAL CONNECTION PERMIT FROM THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES). IF THE SANITARY SEWER IS LOCATED WITHIN THE PUBLIC RIGHT OF WAY AN EXCAVATION PERMIT SHALL ALSO BE REQUIRED.
2. THE CONNECTION SHALL BE MADE PER THE RECOMMENDATIONS OF THE MANUFACTURER, AND IN THE PRESENCE OR WITH THE APPROVAL OF THE T&ES, CONSTRUCTION AND INSPECTION (C&I) INSPECTOR.
3. THE SADDLE SHALL PROPERLY MATCH THE SANITARY SEWER MAIN PIPE.
4. THE CUT ON THE EXISTING PIPE MUST BE NO LARGER THAN NECESSARY TO INSTALL SADDLE.
5. ROUGH EDGES LEFT BY SAW CUT OR CORING SHALL BE SMOOTHED WITH A FILE OR SAND PAPER DEPENDING UPON THE MATERIAL OF THE SANITARY SEWER PIPE.
6. OVER CUTTING THE HOLE OR DAMAGING THE SEWER MAIN WILL WARRANT REPLACEMENT OF THE DAMAGED MAIN LINE SEGMENT AND INSTALLATION OF A FACTORY MANUFACTURED WYE OR TEE CONNECTION PER DETAIL CSLC-1B.
7. THE SADDLE CONNECTION MAY BE REPLACED WITH COMPRESSION SLEEVE CONNECTION WITH APPROVAL OF CITY ENGINEER AND/OR DIRECTOR, T&ES.
8. THE HOLES MUST BE OFFSET MINIMUM 2' FROM THE JOINTS.
9. T&ES INSPECTOR MUST INSPECT THE TAP PRIOR TO BACKFILL.

Pipe Type	Pipe Cutting Method	Connection Type	Applicable Detail
Transite	Transite Pipe Cutter	Romac CB Sewer Saddle or approved equal	CSLC-1A
Concrete	Coring	Romac CB Sewer Saddle or approved equal	CSLC-1A
Cast Iron/Ductile Iron	Tapping Machine	Romac CB Sewer Saddle or approved equal	CSLC-1A
Vitrified Clay Pipe (VCP)	Saw Cut	Manufactured Y or T connection	CSLC-1B
Brick	Special design		
Non-circular pipe			
Other Material			



NOTE:

- 1) ROMAC CB SEWER SADDLE OR CITY APPROVED EQUAL
- 2) ROMAC CB STRAPS 304 STAINLESS STEEL
- 3) EXISTING SEWER MAIN
- 4) 45° ELBOW/ BEND
- 5) PVC LATERAL SDR 26 OR SCHEDULE 40
- 6) CLASS "A3" CONCRETE CRADLE TO JOINT

CONCRETE CRADLE TO BE USED IF COVER IS LESS THAN 5 FEET OR MORE THAN 12 FEET. CRADLE TO BE POURED TO SPRING LINE OF PIPE AND TO SUPPORT THE SANITARY LATERAL. IF COVER IS 2 FEET OR LESS, PIPE IS TO BE ENCASED IN CONFORMANCE WITH CSSE-1.

SANITARY SEWER LATERAL CONNECTION

12/03/2010

REVISION DATE

CSLC-1A

PAGE 14

TRANSPORTATION & ENVIRONMENTAL
SERVICES DEPARTMENT

ALEXANDRIA

VIRGINIA

12/03/2010

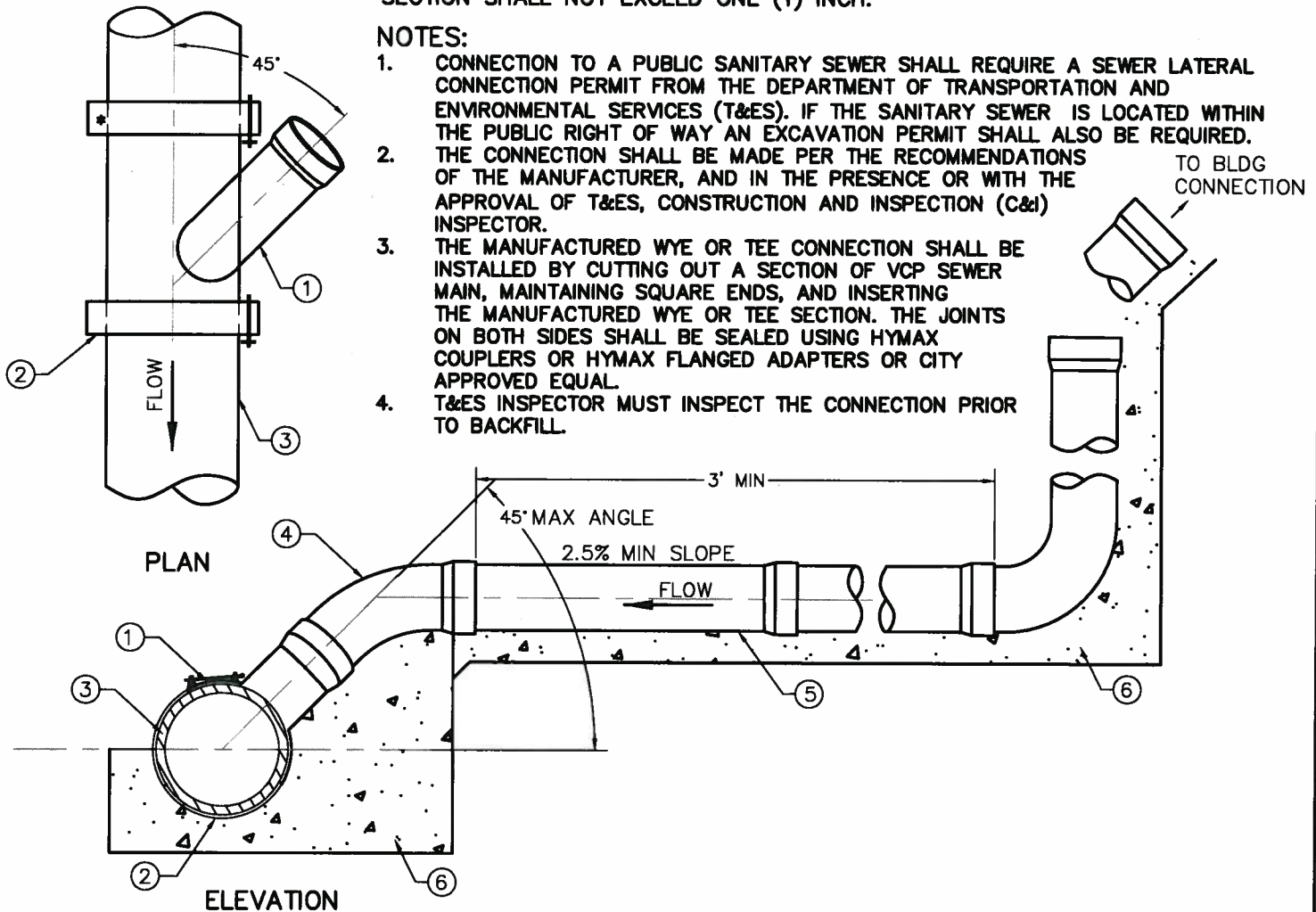
APPROVED

DATE

* EACH JOINT SPACE/ BETWEEN THE EXISTING PIPE AND THE INSERTED SECTION SHALL NOT EXCEED ONE (1) INCH.

NOTES:

1. CONNECTION TO A PUBLIC SANITARY SEWER SHALL REQUIRE A SEWER LATERAL CONNECTION PERMIT FROM THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES). IF THE SANITARY SEWER IS LOCATED WITHIN THE PUBLIC RIGHT OF WAY AN EXCAVATION PERMIT SHALL ALSO BE REQUIRED.
2. THE CONNECTION SHALL BE MADE PER THE RECOMMENDATIONS OF THE MANUFACTURER, AND IN THE PRESENCE OR WITH THE APPROVAL OF T&ES, CONSTRUCTION AND INSPECTION (C&I) INSPECTOR.
3. THE MANUFACTURED WYE OR TEE CONNECTION SHALL BE INSTALLED BY CUTTING OUT A SECTION OF VCP SEWER MAIN, MAINTAINING SQUARE ENDS, AND INSERTING THE MANUFACTURED WYE OR TEE SECTION. THE JOINTS ON BOTH SIDES SHALL BE SEALED USING HYMAX COUPLERS OR HYMAX FLANGED ADAPTERS OR CITY APPROVED EQUAL.
4. T&ES INSPECTOR MUST INSPECT THE CONNECTION PRIOR TO BACKFILL.



MANUFACTURED WYE OR TEE CONNECTION FOR EXISTING VITRIFIED CLAY PIPE (VCP) OR REPLACING ENTIRE SECTION OF OTHER MATERIALS PIPES

NOTE:

- 1) STANDARD MANUFACTURED WYE OR TEE SECTION
- 2) HYMAX COUPLER OR FLANGED ADAPTERS OR CITY APPROVED EQUAL
- 3) EXISTING SANITARY SEWER
- 4) 45° ELBOW/ BEND
- 5) PVC LATERAL SDR 26 OR SCHEDULE 40
- 6) CLASS "A3" CONCRETE CRADLE TO JOINT

CONCRETE CRADLE TO BE USED IF COVER IS LESS THAN 5 FEET OR MORE THAN 12 FEET. CRADLE TO BE POURED TO SPRING LINE OF PIPE. IF COVER IS 2 FEET OR LESS, PIPE IS TO BE ENCASED IN CONFORMANCE WITH CSSE-1.

Pipe Type	Pipe Cutting Method	Connection Type	Applicable Detail
Transite	Transite Pipe Cutter	Romac CB Sewer Saddle or approved equal	CSLC-1A
Concrete	Coring	Romac CB Sewer Saddle or approved equal	CSLC-1A
Cast Iron/ Ductile Iron	Tapping Machine	Romac CB Sewer Saddle or approved equal	CSLC-1A
Vitrified Clay Pipe (VCP)	Saw Cut	Manufactured Y or T connection	CSLC-1B
Brick	Special design		
Non-circular pipe			
Other Material			

SANITARY SEWER LATERAL CONNECTION

12/03/2010

REVISION DATE

CSLC-1B

PAGE 14A

TRANSPORTATION & ENVIRONMENTAL
SERVICES DEPARTMENT

ALEXANDRIA

VIRGINIA

12/03/2010

APPROVED

DATE


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 06-18

DATE: MAY 31, 2018

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM:  LALIT SHARMA, P.E., DIVISION CHIEF, SANITARY INFRASTRUCTURE
DIVISION, TRANSPORTATION AND ENVIRONMENTAL SERVICES

SUBJECT: SANITARY SEWER CONNECTION FEES FOR FY2019
CITY CODE SECTION 5-6-25.1

Effective July 1, 2018, for Final Site Plans and Grading Plans, the sanitary sewer connection fees are hereby increased as outlined in the revised fee schedule below. The plan submission date governs the applicable fee schedule which shall be determined by the date that the Final 1 Site Plan or initial Grading Plan was received by the City. For Site Plans, please note that the date the plan was submitted to ESI for Minimum Submission Review is not the same as the Final 1 Submission Date.

For FY 2019: July 1, 2018 through June 30, 2019:

- **\$9,018** single-family detached, semi-detached, duplex or townhouse
- **\$8,116;** per dwelling unit; multi-family building, i.e. condominium apartments (90% of single-family rate)
- **\$8,116;** per unit; hotel/motel (90% of single-family rate)

Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property. The non-residential fee chart is located on Page 2.

Fee Chart for Nonresidential Property

<i>Meter Size (inches)</i>	<i>Maximum Capacity (GPM)</i>	<i>3/4" Meter Equivalent</i>	<i>Fee</i>
3/4 or smaller	30	1.00	\$9,018
1	50	1.67	\$15,060
1 1/2	100	3.33	\$30,029
2	160	5.33	\$48,065
3	320	10.76	\$97,031
4	500	16.67	\$150,326
6	1000	33.33	\$300,563
8	1600	53.33	\$480,917
10	2300	76.67	\$691,391

The sanitary sewer connection fee increases reflect the requirements of City Code Section 5-6-25.1. This section of the City Code was amended by the Alexandria City Council on October 14, 2017. On July 1 of each fiscal year, these fees shall be increased by the annual rate of inflation as determined by the CPI-U for the Washington, DC-MD-VA-WVA Combined Statistical Area. For Fiscal Year 2019 an increase of 1.8% was used based on the CPI-U rate from March 2017 to March 2018.

Tear-down credits: For connections that involve the removal of an existing structure with an existing tap, a credit will be provided, equal to 50 percent of the current fee that would be applied to the structure(s) being removed. For mixed-use properties, the credit will be based on the sum of the residential credit and nonresidential credit, in accordance with Section 5-6-25.1 of the City Code. The credit shall only apply to properties removed or demolished not longer than three years prior to the submission of the final site plan or grading plan for the new structure.

Conversions: For conversions of existing buildings that increase the number of units or change use, the sanitary sewer connection fee shall be calculated as follows:

- For conversions with approvals or permits granted from May 18, 2013 to June 30, 2018: a sewer connection fee of 60 percent of the City Code stipulated amount shall be applied; and
- For conversions with approvals or permits granted from July 1, 2018 to June 30, 2019: a sewer connection fee of 80 percent of the City Code stipulated amount shall be applied.
- As of July 1, 2019, the full amount of the fee calculated pursuant to City Code Section 5-6-25.1 (a)(7)(i) or (a)(7)(ii) will be assessed without any adjustment.

If you have any questions, please contact me at 703.746.4072 or Erin Bevis-Carver, P.E., Civil Engineer IV, Sanitary Infrastructure Division at 703.746.4154.


City of Alexandria, Virginia

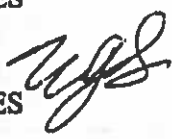
MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 02-16

DATE: JULY 17, 2015

TO: PUBLIC UTILITIES

THROUGH: YON LAMBERT, AICP, DIRECTOR
TRANSPORTATION & ENVIRONMENTAL SERVICES 

FROM: WILLIAM J. SKRABAK, DEPUTY DIRECTOR
TRANSPORTATION & ENVIRONMENTAL SERVICES 

SUBJECT: UTILITY RESTORATION INSPECTION PERMIT FEE

On Thursday May 7, 2015, City Council voted to begin collecting an inspection fee for restoration work done by public utilities as a part of the FY16 Budget approval process. This fee will become effective as of the date of this memorandum. (City Code Section 5-2-117-146)

The FY16 approved budget indicates the inspection fee will offset the increased Utility Site Inspection staffing and provide a new Transportation & Environmental Services Position. The position will provide a designated Inspector II for public utilities and improved service.

The Utility Restoration Inspection Permit fee will be applied during permit application and cost will be \$75.00 per cut or \$500 per block, whichever is less, per occurrence. An inspection fee will be collected for temporary and final patches, as well as, responding to valid complaints.

If you have any questions, you may call the Permit Office at 703.746.4035.

Attachment

Cc: Maurice F. Daly, Division Chief, Infrastructure & Right-Of-Way
Emilio Pundavela, Civil Engineer IV, Development and Permits Section Manager



PERMIT FEE INFORMATION

TRANSPORTATION & ENVIRONMENTAL SERVICES CONSTRUCTION MANAGEMENT & INSPECTION DIVISION

FOR ADDITIONAL INFORMATION REGARDING PERMITS
AND PERMIT FEES

CALL THE PERMIT OFFICE AT 703-746-4035

**** NOTE: PERMIT DURATION IS 1 DAY TO A MAXIMUM OF 30 DAYS**

***** NOTE: UTILITY RESTORATION INSPECTION \$75.00 PER CUT OR \$500.00 PER BLOCK, WHICHEVER IS LESS, PER OCCURRENCE**

PARKING FEES ASSOCIATED WITH ANY OF THE FOLLOWING PERMITS ARE ADDITIONAL

PERMIT TYPE	FEE	** DURATION
Close Sidewalk (Full or Partial)	\$125	** 30 Days
Crane/Manlift	\$125	** 30 Days
Cross Curb, Gutter & Sidewalk	\$125	** 30 Days
Dumpster/Pod/Packing Crate/Trailer for Moving	\$125	** 30 Days
Excavation	\$250 Per Block	** 30 Days
Utility Restoration Inspection (Per Cut)	\$75 Per Cut	***Per Occurrence
Utility Restoration Inspection (Per Block)	\$500 Per Block	***Per Occurrence
Hauling	\$125	** 30 Days
Horse & Carriage	\$125	Per Month
Ingress and Egress	\$125	** 30 Days
Ladder/Scaffold	\$125	** 30 Days
Lane Closure	\$125	** 30 Days
Noise (Construction)	\$50	Per Event
Noise (Music)	\$20	Per Event
Nonpermanent Planter	\$125	Per Month
Over Weight and/or Over Size Vehicle	\$30	Per Day
Pedicab/Rickshaw	\$125	Per Month
Sewer Lateral Permit (Permit Only, Connection Fee Calculated Separately)	\$125	Per Connection
Solicitation of Funds	\$125	Per Event
Solid Waste Containers (1-10 CY)	\$3	Fiscal Year
Solid Waste Containers (10-40 CY)	\$5	Fiscal Year
Solid Waste Hauling (Per Pick-up Truck)	\$150	Fiscal Year
Solid Waste Hauling (Per Mechanized & Non-Mechanized)	\$300	Fiscal Year
Special Event (Parade, Race, Walk-a-Thon, etc.)	\$125	Per Event
Stockpile Materials	\$125	** 30 Days
Street Closure for Block Party	\$125	Per Event
Street Closure for Construction	\$125	Per Event
Temporary Fence	\$125	** 30 Days
Trailer for Construction	\$125	** 30 Days
Waiver of Underground Ordinance	\$100	Per Application
PARKING	FEE	DURATION
Metered Spaces	\$40	Per Space, Per Day
Non-Metered Spaces	\$30	Per Space, Per Day
Cover NO PARKING Signs	\$10	Per Sign, Per Day
NOTE: 1 PARKING SPACE IS 20 FEET		

S:\consins\city hall\fees\fee schedule FY2016 (7/15/15)


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 05-14

DATE: JUNE 30, 2014

TO: DEVELOPERS, CONTRACTORS, ENGINEERS, ARCHITECTS,
SURVEYORS AND APPLICANTS

FROM: MAURICE DALY, P.E., DIVISION CHIEF, INFRASTRUCTURE/
RIGHT OF WAY DIVISION, TRANSPORTATION AND
ENVIRONMENTAL SERVICES 

SUBJECT: ALLOWANCE OF ALTERNATIVE METHODS OF STORM AND
SUBSOIL WATER DISCHARGE

This memorandum is to provide updated information on the disposal requirements of water discharged from sump pumps, foundation drains and roof drains. This memorandum supersedes all previous memoranda on this subject including those dated April 8, 2004 and June 18, 2004.

Section 5-6-224 of the City Code requires the connection of storm water and ground water discharges, to include roof drains and sump pumps, be directly connected to the City's storm sewer system where available. Discharge to the City's storm sewer system shall met by a connection to an available storm sewer inlet. Availability of a storm sewer inlet is defined by the Code section as within 100 feet of the property line for all one and two family residential properties; and within 500 feet of the property line for all other types of properties. The connection requirement ensures that runoff of this type does not flow directly onto adjacent properties, creating a nuisance and potentially flooding adjacent structures. It also ensures that this runoff does not accumulate in the street and freeze during cold weather periods, thereby creating a safety hazard for vehicles, bicycles and pedestrians.

On April 13, 2013, City Council adopted an ordinance (ORD. NO. 4800) that amends the requirements of Section 5-6-224 to allow the Director of Transportation and Environmental Services to permit alternative means of disposal when it can be shown to provide an environmental benefit. In each case, the Director will first determine that no nuisance will be created if the storm or ground water is not directly connected to the storm sewer. Additionally, the code has been modified to allow storm water from roof drains only to be discharged directly to the gutter or street at the Director's discretion. This will avoid more costly connections to the storm sewer for roof drains, which only discharge water during rain events when the street and gutter are already wet. However, the Director may decide not to permit discharge directly into the gutter depending on the topography of the street, such as streets that are very flat and subject to ponding and/or freezing, or other site-specific constraints.

If you have any questions or require additional information, please call 703-746-4065.


City of Alexandria

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 02-14

DATE: AUGUST 19, 2013

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: WILLIAM J. SKRABAK, DEPUTY DIRECTOR, OFFICE OF ENVIRONMENTAL QUALITY, TRANSPORTATION AND ENVIRONMENTAL SERVICES 

SUBJECT: PUBLIC OUTREACH FOR THE IMPLEMENTATION OF THE VIRGINIA STORMWATER MANAGEMENT ACT

ISSUE: To identify opportunities to provide input and engage the public in amending the City's Stormwater and Erosion and Sediment Control Ordinances to meet the new State requirements which are more stringent.

The Virginia Stormwater Management Act was amended and re-enacted in September of 2011 for the purposes of creating more universal and stringent stormwater standards and to provide the framework for localities to assume the responsibility for the Virginia Stormwater Management Program. To accomplish this, localities are required to amend local ordinances to conform to the state laws and promulgated regulations, with some allowances for individual municipal needs. The City is initiating a process to amend the City's ordinance which will include public outreach to allow public input into these new changes.

Below is a schedule to conduct outreach to key stakeholders, receive input and guide ordinance development leading to adoption by Council. We encourage your participation in this process. Please note that the effective date of the new ordinance is anticipated to be July 1, 2014.

The Stormwater regulations can be found at:

<http://leg1.state.va.us/cgi-bin/legp504.exe?000+reg+4VAC50-60>. For updates on the City process see the Watershed Management page:

<http://www.alexandriava.gov/tes/oeq/info/default.aspx?id=3844>

VSMP Outreach Factsheet see the Watershed Management page:
<http://www.alexandriava.gov/tes/oeq/info/default.aspx?id=3844>

Schedule

Internal Stakeholder Meetings:	January through September, 2013
External Stakeholder Meetings (e.g. Northern Virginia Building Industry Association (NVBIA), Chamber of Commerce, and other groups):	September through November, 2013
Draft Ordinance to VA Department of Environmental Quality (DEQ):	December 15, 2013
Ordinance to Planning Commission:	January/February, 2014
Ordinance to Council:	January/February, 2014
Final Ordinance to DEQ:	March, 2014
Implement Ordinance:	July 1, 2014

For more information contact the Claudia.Hamblin-Katnik@alexandriava.gov, Watershed Program Administrator at 703.746.4065.

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 04-2014*

DATE: JUNE 1, 2014

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: WILLIAM SKRABAK, DEPUTY DIRECTOR, INFRASTRUCTURE AND ENVIRONMENTAL QUALITY, DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES *WS*

SUBJECT: TREATMENT OF ROADWAY RUNOFF ASSOCIATED WITH DEVELOPMENT PROJECTS

Article XIII, the Environmental Management Ordinance, requires water quality treatment of impervious areas for all land disturbances over 2,500 square feet. To date this existing requirement has been particularly difficult to achieve with linear projects such as sidewalks and roadways. To facilitate compliance and provide guidance in meeting requirements of the Ordinance for linear projects, the following policy is being promulgated.

In order to improve water quality within the City of Alexandria and the Chesapeake Bay the runoff from any NEW public roadways created as a consequence of development or redevelopment shall be treated by the developer. All Best Management Practices (BMPs) that treat right-of-way runoff shall be installed by the developer. Under certain circumstances the BMPs that treat right-of-way water quality volume may be placed in the right-of-way. Any BMP in the right-of-way shall follow design guidelines established by the City of Alexandria and be subject to approval by the Director of T&ES. Conditions under which BMPs can be placed in the right-of-way are as follows:

1. If all water flowing to the BMP is derived from impervious area on public property/right-of-way then a BMP in the right-of-way is acceptable. The property owner will cover infrastructure and installation costs of the BMP and the City will maintain the BMP. The type of BMP will be as designated and approved by the Director of T&ES.
2. Directing the water quality volume generated on private property to a BMP designed to treat right of way runoff is discouraged as the purpose of the BMP is to treat runoff from the public right of way, not that from a privately developed parcel. However, if adjacent impervious surfaces (plazas, sidewalks, etc.) can be

treated along with roadway runoff (and cannot be treated within a BMP on the property) their use is not precluded. If there is a nominal portion of privately generated water quality volume flowing to the BMP due to proven grading constraints, then the City may accept responsibility for maintenance. The type of BMP will be as designated and approved by the Director of T&ES.

The developer or owner shall remove trash and be responsible for the long-term health and vigor of vegetation beyond the 3-year maintenance bond period. All maintenance concerns, especially long-term health and vigor of vegetation and litter removal, shall be negotiated at site plan stage.

Any questions pertaining to this policy can be directed toward the City's Stormwater Division at 703 746-4065.

***This Memo to Industry replaces Memo to Industry 01-2012.**


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO 01-18

DATE: JANUARY 24, 2018

TO: DEVELOPERS, ARCHITECTS, ENGINEERS, AND SURVEYORS

FROM: WILLIAM SKRABAK, DEPUTY DIRECTOR, INFRASTRUCTURE AND ENVIRONMENTAL QUALITY, TRANSPORTATION AND ENVIRONMENTAL SERVICES 

SUBJECT: USE OF MANUFACTURED/PROPRIETARY STORMWATER BMPS

BACKGROUND: Stormwater Best Management Practices (BMPs) are facilities that are designed to treat stormwater before it is discharged into local waterways such as the Potomac River and Chesapeake Bay. These facilities remove pollutants such as phosphorous and nitrogen from runoff which improves water quality and helps the City to meet its Chesapeake Bay TMDL pollutant removal requirements. The City includes the implementation of new BMPs on development and redevelopment sites in its Chesapeake Bay Action Plan as a primary resource for meeting TMDL pollutant removal requirements.

RATIONALE: Manufactured Treatment Devices (MTDs), also referred to as proprietary stormwater BMPs, are commercially fabricated products that are used to treat stormwater runoff. While these devices have received interim approval from the Virginia Department of Environmental Quality (DEQ) via the Virginia BMP Clearinghouse to address state phosphorus reduction requirements for development and redevelopment, MTDs are not recognized by the U.S. Environmental Protection Agency (EPA) Chesapeake Bay Program as approved stormwater BMPs to be used for addressing pollutant removal requirements for the Chesapeake Bay Total Maximum Daily Load (TMDL). Further, MTDs do not reduce the volume of stormwater runoff. The continued use of these devices within the City of Alexandria for stormwater treatment hinders the City's ability to meet the Chesapeake Bay TMDL requirements.

Nonproprietary surface BMPs include all nonproprietary BMPs approved by the Virginia BMP Clearinghouse excluding sand filters. These include traditional BMPs such as wet ponds and wetlands and as well as urban green infrastructure BMPs such as green roofs, bioretention, and permeable pavement. These practices are approved by the EPA's Chesapeake Bay Program for pollutant removal. In addition to their water quality benefits, these practices provide increased quality of life benefits such as green space and wildlife habitats while often having lower life cycle costs than MTDs. Prioritizing the use of these practices is consistent with the City's Eco-City Charter guiding principle of protecting our water resources through the use environmentally responsible stormwater control, while addressing our Chesapeake Bay pollutant removal requirements.

ACTION REQUIRED: Beginning with the effective date of this memo for all new development and redevelopment:

- A minimum of 65% of the total phosphorus (TP) removal required by the Virginia Stormwater

Management Program (VSMP) must be achieved using nonproprietary surface BMPs approved by the Virginia Stormwater BMP Clearinghouse.

- A maximum of 35% of the TP removal required by the VSMP may be achieved using MTDs and/or sand filters approved by the Virginia Stormwater BMP Clearinghouse.
- Any approved BMP may be used to meet the balance of the Alexandria Water Quality Volume Default (WQVD).
- MTDs may not be used on single-family detached residential projects.

Concept 1 site plan submittals with conceptual stormwater layouts are encouraged to ensure plans meet these requirements early in the site plan process. This layout includes approximate locations and types(s) of facilities proposed. Projects must demonstrate compliance with the policies in this memo during the site plan process no later than Verification of Completeness for site plans and Final 1 for grading plans.

EXCEPTIONS: May be provided on a case-by-case basis where physical site constraints exist, such as high groundwater tables, that limit or preclude the use of nonproprietary, surface BMPs. A request must be submitted for the use of MTDs using the City's form to be approved by the Director of T&ES or his or her designee.

EFFECTIVE DATE: Site plans that submit a concept plan on or after April 1, 2018, must comply with this policy. Grading plans that submit a final 1 plan on or after April 1, 2018 must comply with this policy.

- Site plans that have submitted a concept plan and grading plans that have submitted a Final 1 plan, but that have not yet been accepted by the City: Applicant must work with staff to maximize compliance with this policy.


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 08-2014

DATE: 6/20/2014

TO: DEVELOPERS, ARCHITECTS, ENGINEERS, AND SURVEYORS

FROM: WILLIAM SKRABAK, DEPUTY DIRECTOR, INFRASTRUCTURE AND ENVIRONMENTAL QUALITY, TRANSPORTATION AND ENVIRONMENTAL SERVICES 

SUBJECT: VIRGINIA STORMWATER MANAGEMENT PROGRAM
CONSTRUCTION GENERAL PERMIT APPLICATION,
MODIFICATION AND RENEWAL PROCESS EFFECTIVE JULY 1,
2014

In accordance with new Virginia Stormwater Management Program (VSMP) Regulations, effective July 1, 2014, the City of Alexandria will administer construction general permits for discharges of stormwater from construction activities.

Who Must Apply for Construction General Permit Coverage?

Operators of construction activities resulting in land disturbance of 1 acre or greater are required to apply for coverage under a permit. Please note that a permit is not required for detached single-family home construction within or outside of a common plan of development or sale. For additional information visit the Virginia Department of Environmental Quality's Construction General Permit information page.

<http://www.deq.virginia.gov/Programs/Water/StormwaterManagement/VSMPPermits/ConstructionGeneralPermit.aspx>

This permit is in addition to any other non-stormwater permits or plan approvals that are otherwise required from the City of Alexandria for development projects.

How do I apply for a Permit?

The City's permit application process requires an initial submittal of an unsigned registration statement and payment of the first 50% of the applicable fee with the minimum submission review of a final site plan or the first final submission of the grading plan. The submitted development plan should include the required stormwater pollution prevention plan (SWPPP) elements for review. Once the SWPPP has been approved, the applicant is required to submit a complete and accurate registration statement and the remainder of the permit fee no later than when the bond package is posted.

Please note that the State portion of the fee must be paid directly to VDEQ. Instructions as to how to pay this fee will be sent to the applicant by VDEQ via the email address provided on the registration statement once notified by the City that the registration statement and SWPPP are complete and approved. State fees cannot be paid prior to City approval of the registration statement and SWPPP.

How is a Permit issued?

Once a signed and completed registration statement and SWPPP has been approved by the City, the information provided in the registration statement will be uploaded by the City into the Virginia Department of Environmental Quality's E-Permitting database. VDEQ will then send an e-mail to the applicant and the City confirming that a complete registration statement has been received. VDEQ will also send a separate email to the applicant with instruction as to how to pay the State portion of the fee due. Once payment is received by VDEQ, a permit will be emailed by VDEQ to the applicant and the City within 2 to 4 days of receipt of payment. If no email address is provided by the applicant or if a paper copy is requested, VDEQ will mail the permit to the person and address listed on the registration statement.

How much are the Permit Fees?

There are two separate fees, one payable to the City of Alexandria, and the other to Commonwealth of Virginia (VDEQ). See the accompanying fee schedule. The fees are based on the amount of disturbance and the type of construction. Please note that the State portion of the fee must be paid directly to VDEQ.

Where do I submit the required plan(s), registration statement and City's fee?

T&ES Permit Counter, 4th floor, City Hall.*

*Please note that the required State fee should be paid directly to Virginia Department of Environmental Quality (VDEQ).

What Forms of Payment are accepted for the City Fees? Who do I make a check out to?

Credit Cards and checks are acceptable forms of payments. The City accepts Visa and MasterCard. Checks should be made out to "The City of Alexandria" with VSMP Fee in the memo line.

Where do I submit the required State fee?

Instructions as to how to pay this fee will be sent to the applicant by VDEQ via the email address provided on the registration statement once notified by the City that the registration statement and SWPPP are complete and approved. State fees cannot be paid prior to City approval of the registration statement and SWPPP. The City is not accepting payment of State fees.

When is the Permit Fee Due?

Payment of the first 50% of the City fee is due at minimum submission review of a final site plan or the first final submission of the grading plan. The second half of the City fee is due no later than when the bond is posted.

The State portion of the fee must be paid directly to VDEQ. Instructions as to how to pay this fee will be sent to the applicant by VDEQ via the email address provided on the registration statement once notified by the City that the registration statement and SWPPP are complete and approved.

What is the schedule for reviewing and issuing the permit?

The City will finish a completeness review of the submission within 15 calendar days of receipt of the application. Completeness notification will be provided via the email address given on the registration statement. Detailed comments on the elements of the SWPPP will be provided in the same timeframe and format as the existing site or grading plan review process (as applicable).

Prior to release of any portion of the final site development plan, including the phase I erosion and sediment control plan, the following stormwater/VSMP specific requirements must be submitted and approved:

- City Approved SWPPP
- City VSMP Fees Paid
- Complete and Accurate Registration Statement Submitted to the City
- State VSMP Fees Paid Directly To VDEQ
- Permit Issued By VDEQ
- Recorded BMP Maintenance Agreement

How do I terminate a permit?

Once construction is complete and all permit conditions have been satisfied, the applicant should submit a notification to terminate the construction general permit to the City. This can be submitted by email or in person at the T&ES Permit Center Counter (301 King Street, Room 4130).

What are the annual permit renewal fees?

See the accompanying fee schedule. Annual fees will be billed to the operator of any active permit in January of each calendar year. All annual fees are due by April 1. All annual fees are payable to the City at the T&ES Permit Center.

What are the permit modification fees?

See the accompanying fee schedule. Any modification fees will be due at the time of application for an amendment to an approved plan and are payable to the City at the T&ES Permit Center Counter.



DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

Infrastructure and Environmental Quality

P.O. Box 178 – City Hall

Alexandria, Virginia 22313

<http://alexandriava.gov/Environment>

VIRGINIA STORMWATER MANAGEMENT PROGRAM

FEE SCHEDULE

EFFECTIVE JULY 1, 2014

The Virginia State Stormwater Management Regulations established fees in 9VAC25-870-800 for the administration of local stormwater programs. The City Council adopted the fees listed in this schedule on June 10, 2014. This fee schedule becomes effective as of July 1, 2014.

Payment of the total fee due is divided into two payments. The first portion of the fee is due when the Development Plan is submitted for minimum submission review (MSR) or Final One depending on the type of submission. The final portion of the fee is due at bonding, prior to release of the plan for construction. At this time, the City of Alexandria will not be collecting the State (VDEQ) portion of the total fee. It is the responsibility of the applicant to pay the State portion of the fee due directly to VDEQ. The City of Alexandria cannot release any portion of the final site plan (including Phase I Erosion and Sediment Control) until the State has acknowledged receipt of payment, and issued coverage under the state Construction General Permit, when applicable.

Please note that a registration statement is not required for detached single-family home construction within or outside of a common plan of development or sale, but that the City will still collect the scheduled fee as the projects still must adhere to plan review requirements and the requirements of the Construction General Permit.

INITIAL VSMP PERMIT TYPE	Total Fee to be Paid	Due at MSR / Final One Submittal	Due at Bonding Prior to Permit Coverage	Portion Paid to VDEQ
Single Family Residential Development with Disturbed Area equal to or greater than 2,500 square feet and less than 5 acres <i>No Registration Statement or Formal Construction General Permit Coverage required. Projects are still required to adhere to requirements of the General Permit. Applies to Single Family Residential within or outside of a common plan of development or sale.</i>	\$319	\$145	\$174	\$0
Development with Disturbed Area equal to or greater than 2,500 square feet and less than 1 acre <i>No Registration Statement or Formal Construction General Permit Coverage Required. Projects are still required to adhere to requirements of the General Permit. Applies to non-single family residential and commercial projects within or outside a common plan of development or sale</i>	\$319	\$145	\$174	\$0
Development with Disturbed Area equal to or greater than 1 acre and less than 5 acres <i>Registration Statement Required. Applies to non-single family detached projects within common plans of development or sale.</i>	\$2,970	\$1,350	\$864	\$756
Development with Disturbed Area equal to or greater than 5 acres and less than 10 acres. <i>Registration Statement Required. Applies to sites or areas within common plans of development or sale.</i>	\$3,740	\$1,700	\$1,088	\$952
Development with Disturbed Area equal to or greater than 10 acres and less than 50 acres. <i>Registration Statement Required. Applies to sites or areas within common plans of development or sale.</i>	\$4,950	\$2,250	\$1,440	\$1,260
Development with Disturbed Area equal to or greater than 50 acres and less than 100 acres. <i>Registration Statement Required. Applies to sites or areas within common plans of development or sale.</i>	\$6,710	\$3,050	\$1,952	\$1,708
Development with Disturbed Area equal to or greater than 100 acres <i>Registration Statement Required. Applies to sites or areas within common plans of development or sale.</i>	\$10,560	\$4,800	\$3,072	\$2,688

Fees for Permit Modifications

If the state permit modifications result in changes to stormwater management plans that require additional review by the City, such reviews shall be subject to the following fees. In addition to the permit modification fee, modifications resulting in an increase in total disturbed acreage shall pay the difference in the initial VSMP permit fee paid and the VSMP permit fee that would have applied for the total disturbed acreage in the fee structure above for initial permitting. All fees for modifications are to be paid by the applicant and submitted directly to the City. No state permit application fees will be assessed to:

1. State permittees who request minor modifications to state permits as defined in 9VAC25-870-10 or other minor amendments at the discretion of the VSMP authority.
2. State permittees whose state permits are modified or amended at the request of the VSMP authority or department by the board. This does not include errors in the registration statement identified by the VSMP authority, department, or board or errors related to the acreage of the site.

State permit modifications at the request of the state permittee resulting in changes to stormwater management plans that require additional review by the VSMP authority shall not be exempt pursuant to this section and shall be subject to the applicable fees.

STORMWATER MANAGEMENT FEES – MODIFICATIONS OR TRANSFERS:	Total Fee
Single Family Residential with Disturbed Area equal to or greater than 2,500 square feet and less than 5 acres) <i>Applies to Single Family Residential within or outside a common plan of development.</i>	\$22
Development with Disturbed Area equal to or greater than 2,500 square feet and less than 1 acre <i>Applies to non-single family residential projects within common plans of development or sale</i>	\$22
Development with Disturbed Area equal to or greater than 1 acre and less than 5 acres <i>Applies to non-single family detached projects within common plans of development or sale.</i>	\$220
Development with Disturbed Area equal to or greater than 5 acres and less than 10 acres. <i>Applies to sites or areas within common plans of development or sale.</i>	\$275
Development with Disturbed Area equal to or greater than 10 acres and less than 50 acres. <i>Applies to sites or areas within common plans of development or sale.</i>	\$330
Development with Disturbed Area equal to or greater than 50 acres and less than 100 acres. <i>Applies to sites or areas within common plans of development or sale.</i>	\$495
Development with Disturbed Area equal to or greater than 100 acres <i>Registration Statement Required. Applies to sites or areas within common plans of development or sale.</i>	\$770

Annual Permit Maintenance Fees

The following annual VSMP permit maintenance fees are required to continue land-disturbing activities, and to maintain coverage under the State Construction General Permit, as applicable. These fees apply to each type of category identified below, including expired general permits that have been administratively continued. These fees shall apply until land-disturbing activities and/or general permit coverage is terminated. The total maintenance fee must be paid by the applicant to the City of Alexandria. Fees are due by April 1 annually for land-disturbing activities and permits that were active within any portion of the associated calendar year.

STORMWATER MANAGEMENT FEES – PERMIT MAINTENANCE:		Total Fee
Single Family Residential with Disturbed Area equal to or greater than 2,500 square feet and less than 5 acres)		\$55
<i>Applies to Single Family Residential within or outside a common plan of development.</i>		
Development with Disturbed Area equal to or greater than 2,500 square feet and less than 1 acre		\$55
<i>Applies to non-single family residential projects not within common plans of development or sale</i>		
Development with Disturbed Area equal to or greater than 1 acre and less than 5 acres		\$440
<i>Applies to non-single family detached projects within common plans of development or sale.</i>		
Development with Disturbed Area equal to or greater than 5 acres and less than 10 acres.		\$550
<i>Applies to sites or areas within common plans of development or sale.</i>		
Development with Disturbed Area equal to or greater than 10 acres and less than 50 acres.		\$715
<i>Applies to sites or areas within common plans of development or sale.</i>		
Development with Disturbed Area equal to or greater than 50 acres and less than 100 acres.		\$990
<i>Applies to sites or areas within common plans of development or sale.</i>		
Development with Disturbed Area equal to or greater than 100 acres		\$1,540
<i>Registration Statement Required. Applies to sites or areas within common plans of development or sale.</i>		

All incomplete payments will be deemed as non-payments, and the applicant shall be notified of any incomplete payments. Interest shall be charged for late payments at the underpayment rate set forth in Code of Virginia §58.1-15 and is calculated on a monthly basis at the applicable periodic rate. A 10% late payment fee shall be charged to any delinquent account, defined as over 90 days past due. The City is entitled to all remedies under the Code of Virginia in collecting any past due amount.

City of Alexandria, Virginia


MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 04-08

DATE: JUNE 13, 2008

TO: DEVELOPERS, ARCHITECTS, ENGINEERS, AND SURVEYORS

FROM: EMILY BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING 
TRANSPORTATION AND ENVIRONMENTAL SERVICES

WILLIAM SKRABAK, DIRECTOR, OFFICE OF ENVIRONMENTAL 
QUALITY
TRANSPORTATION AND ENVIRONMENTAL SERVICES

SUBJECTS: WATER QUALITY IMPROVEMENT FUND FEE INCREASE EFFECTIVE
JULY 1, 2008

REVISED STORMWATER STANDARD MAINTENANCE AND
MONITORING AGREEMENT FOR STORMWATER BEST MANAGEMENT
PRACTICE FACILITIES, EFFECTIVE JULY 1, 2008

Water Quality Improvement Fund Fee Increase

The fee for the Water Quality Improvement Fund was set in 2004 based upon estimates of the cost of actually installing and maintaining onsite Best Management Practices (BMPs) through their life cycle. Since that time, technology has changed and costs of meeting pollution control and maintenance goals have risen. It is for these reasons that the Water Quality Improvement Fund fee shall be modified from \$1.50 to \$2.00/square foot of impervious area not treated by a BMP. The change will be implemented July 1, 2008.

Water quality performance criteria set out in Article XIII, Environmental Management Ordinance, intend that improvements in water quality shall be accomplished through incorporation of onsite treatment by a BMP. Applicants are cautioned that pursuing the Water Quality Improvement Fund option to comply with water quality improvement requirements must be justified according to considerations outlined in Section 13-110 of Article XIII and should be employed only as a last resort.

Revised Standard Maintenance and Monitoring Agreement for Stormwater BMP Facilities

A "fillable" PDF version of the stormwater management BMP maintenance agreement and instructions on how to complete the document is now available online at the City's webpage under City Departments/Transportation and Environmental Services/Environmental Quality/

Forms and Publications/Water Quality <http://alexandriava.gov/tes/info/default.aspx?id=3876> or under City Departments/Transportation and Environmental Services/Environmental Quality/Stormwater Management Regulations at http://alexandriava.gov/tes/info/default.aspx?id=3826#sw_post.

Effective July 1, 2008, this form must be used for all City projects. Submittals of the maintenance agreement using the earlier version will not be accepted for review, and therefore may extend the review period.

The content of this form is exactly the same as the previous word document except for the inclusion by reference of the Northern Virginia Regional Commission (NVRC) guidebook titled Maintaining Stormwater Systems: A Guidebook for Private Owners and Operations in Northern Virginia. Designed for individual property owners, homeowners' associations, and residential or commercial property managers, the guidebook outlines basic maintenance and planning tasks to keep BMPs functioning properly. An electronic version of this guidebook can be found in the same locations as the BMP maintenance agreement. Hard copies may be obtained from this office or the NVRC.

If you have any questions about the Water Quality Improvement Fund, please contact Claudia Hamblin-Katnik, Ph.D, Watershed Program Administrator. Questions about the Standard Maintenance and Monitoring Agreement for Stormwater BMP Facilities should be directed to Jesse Maines, Water Quality Compliance Specialist. Both can be reached in the Office of Environmental Quality at 703-838-4334.

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 04-18

DATE: APRIL 4, 2018

TO: DEVELOPERS, ARCHITECTS, SURVEYORS, & ENGINEERS

FROM: HILLARY ORR, DEPUTY DIRECTOR, DEPARTMENT OF TRANSPORTATION
AND ENVIRONMENTAL SERVICES *HRO*

SUBJECT: MAINTENANCE OF TRAFFIC PLANS – MAINTAINING ACCESS FOR
PEDESTRIANS AND BICYCLISTS DURING CONSTRUCTION

In December 2017, the City approved the Vision Zero Action Plan which outlines several action items to help achieve the City's goal of eliminating deaths and serious injuries for people using Alexandria's transportation network. One of the action items calls for staff to "*Evaluate Maintenance of Traffic (MOT) Plan requirements and revise to prioritize safe, accessible, and convenient routes for bicyclists and pedestrians.*" (Action Item 2B.5 – Page 48). In support of this Plan and action item, the City will be requiring MOT plans to better accommodate pedestrians and people using bikes without diversions that might encourage them to make an unsafe decision.

Specifically, unless approved by the Director of T&ES (see Exemptions and Applicability section below), staff will no longer approve MOT plans that:

- (1) divert pedestrians to sidewalks across from or beyond construction sites; or
- (2) divert people using bikes to alternate routes beyond the site.

Pedestrian Access

Effectively immediately, protected access within the public right-of-way must be maintained to support pedestrian mobility adjacent to construction sites. Applicants must consider and propose options in which pedestrians do not have to cross the street to maintain their paths of travel. Applicants are encouraged to consider solutions that accommodate accessible routes without impacting existing on-street parking or travel lanes such as minimizing the construction area or providing covered walkways. In cases where sufficient right-of-way width is not available to accommodate both pedestrian travel and parking, applicants will be required to apply for the closure of on-street parking.

Applicants will be expected to consider implementation tools such as longitudinal channelizers/jersey barriers, temporary flexposts, and other raised traffic control devices to protect these temporary pedestrian facilities. Applicants must supply temporary ramps to support accessibility across changes in elevation (i.e. pedestrian movements from the curb to the parking lane and back onto the curb). Applicants are also responsible for the procurement, implementation, and removal of all necessary signage, control devices, and pedestrian elements. All proposals are subject to review and acceptance by the Department of Transportation and Environmental Services Development and Right-of-Way Division.

Bicycle Access

Effectively immediately, adequate access within the public right-of-way must be maintained for people using bikes where existing bicycle facilities (e.g. bike lane, trail) fall adjacent to construction sites. Temporary barriers, striping, or other pavement marking may be used to delineate temporary travel paths where existing bike lanes are impacted by construction. The minimum width of a temporary bike lane shall be 5 feet. Temporary off-road bike trails may also be allowed and shall be constructed of asphalt or another solid material if approved by the Director of T&ES. If there is not adequate space for a temporary bike lane or trail, people using bikes may be diverted into general travel lanes through supporting signage and/or temporary striping that communicates the change clearly to both bicyclists and drivers.

Applicants are responsible for the procurement, implementation, and removal of all signage and control devices. All proposals are subject to review and acceptance by the Department of Transportation and Environmental Services Development and Right-of-Way Division.

Exemption and Applicability

The requirements of this memo shall not apply in cases which the applicant demonstrates that the provisions of accessible pedestrian and bike routes present either: 1) undue hardship, such as the cost or scale of improvements is not commensurate with the cost or scale of the project or 2) direct and demonstrable safety conflicts, such as an unstable building façade, or the location of a construction entrance or crane. Exemption from these requirements may be provided at the discretion of the Department of Transportation and Environmental Services Development and Right-of-Way Division. In these cases, both the duration and extent of the closure of pedestrian or bicycle facilities must be minimized to the extent possible. In addition, MOT plans shall be designed to prevent or minimize the need for an exemption by locating construction entrances and other construction related facilities or activities in locations with the least impact to or conflict with pedestrian and bicycle preferred routes.

These requirements shall not apply to construction activity for which a sidewalk or bicycle facility closure is needed for seven (7) calendar days or less. In these cases, applicants are encouraged to minimize diversions, but staff will accept MOT plans that include appropriate signage related to sidewalk or bicycle facility closures.

MOT plans will continue to be reviewed by the T&ES Development and Right-of-Way Division staff as part of the normal right of way permitting process. Applicants are encouraged to meet with staff prior to submitting a plan to discuss specific circumstances about the project and site. To minimize closures, an MOT plan shall include phases of implementation to accommodate needs at different stages of construction.

Next Steps

Within one year, staff will review this policy internally to identify how effective it has been in accomplishing the Vision Zero goal of maintaining and improving convenient pedestrian and bicycle access around construction sites. Staff will also discuss if this has caused any difficulties or delays with the permitting process. If needed, additional clarification and guidance will be developed to address these issues.

As part of the Fiscal Year 2020 budget development, staff will also review the permit fees for sidewalk and parking closures and recommend changes to these fees to incentivize maintaining open or accessible

sidewalks during construction. Details about potential changes to permit fees will be presented to the development community as part of this review.

Additional Guidance

Attachment 1 provides updated and new construction notes and standards conditions that will be required to be included in future development plans, site plans, grading plans, park (PRK) plans, or similar plans as well as construction management plans and MOT plans.

Attachment 2 provides examples of potentially acceptable accommodations to maintain pedestrian and bicycle access under different construction situations. These examples have been modified from the Virginia Department of Transportation's *Virginia Department of Transportation Work Zone Pedestrian and Bicycle Guidance* (2016). The full document may be accessed on VDOT's website at http://www.virginiadot.org/business/resources/wztc/2016_WZ_Ped_BikeGuide.pdf.

Attachment 3 provides the lane width information from the Complete Streets Guidelines to assist in determining appropriate widths for temporary travel and parking lanes. The complete document can be found at: <https://www.alexandriava.gov/CompleteStreets>.

Applicants can also refer to ADA Guidelines for more details related to accessibility requirements.

ATTACHMENT:

- 1) Updated Construction Notes and Standard Conditions
- 2) Options to Maintain Pedestrian and Bicycle Access during Construction
- 3) Complete Streets Guidelines – Minimum and Preferred Lane Widths

ATTACHMENT 1: Updated Construction Notes and Standard Conditions.

Standard Construction Management Plan Notes (to be included on all Construction Management Plans and Maintenance of Traffic (MOT) Plans as applicable)

Per Memo to Industry #04-18, pedestrian access shall be maintained at all times and outside the work area for the duration of the project. If sidewalks are impacted, minimum access shall be maintained or protected pedestrian access must be provided. Pedestrians shall not be diverted across the street without the approval from the Director of Transportation and Environmental Services or his designee. Sidewalk closures are subject to separate approval from Transportation and Environmental Services (T&ES) at the time of permit application.

Per Memo to Industry #04-18, bicycle access shall be maintained at all times and outside the work area for the duration of the project. If bicycle facilities are impacted, access shall be maintained by shifting existing travel lanes to accommodate a temporary bike lane or through the creation of an off-street diversion directly adjacent to the travel path. If there is not adequate space for a temporary bike lane or trail, people using bikes may be diverted into general travel lanes through supporting signage and/or temporary striping that communicates the change clearly to both bicyclists and drivers. People using bikes shall not be diverted onto alternate routes without the approval from the Director of Transportation and Environmental Services or his designee.

Development Standard Conditions (in “Construction Management” section)

Revised Condition:

~~Any~~ Bicycle facilities adjacent to the site shall remain open during construction. If a bicycle facility ~~cannot be maintained on the street adjacent to the site must be closed, a detour for bicyclists shall be established and maintained~~ bicycle access shall be maintained adjacent to the site per Memo to Industry #04-18, or to the satisfaction of the Director of T&ES throughout the construction of the project. The plan for maintenance of bicycle access shall be included in the Construction Management Plan for approval by T&ES. (T&ES) [Include for projects adjacent to existing bike lanes or trails]

New Condition:

Sidewalks adjacent to the site shall remain open during construction. If sidewalks must be closed, pedestrian access shall be maintained adjacent to the site per Memo to Industry #04-18, or to the satisfaction of the Director of T&ES throughout the construction of the project. The plan for maintenance of pedestrian access shall be included in the Construction Management Plan for approval by T&ES. (T&ES)

City Department Code Comments (in Transportation and Environmental Services section)

Revised Findings:

A Maintenance of Traffic Plan shall be provided within the Construction Management Plan and shall replicate the existing vehicular and pedestrian routes as nearly as practical, and the Pedestrian and bike access shall be maintained adjacent to the site per Memo to Industry #04-18 or to the satisfaction of the Director of T&ES. ~~pathway shall not be severed or moved for non-construction~~

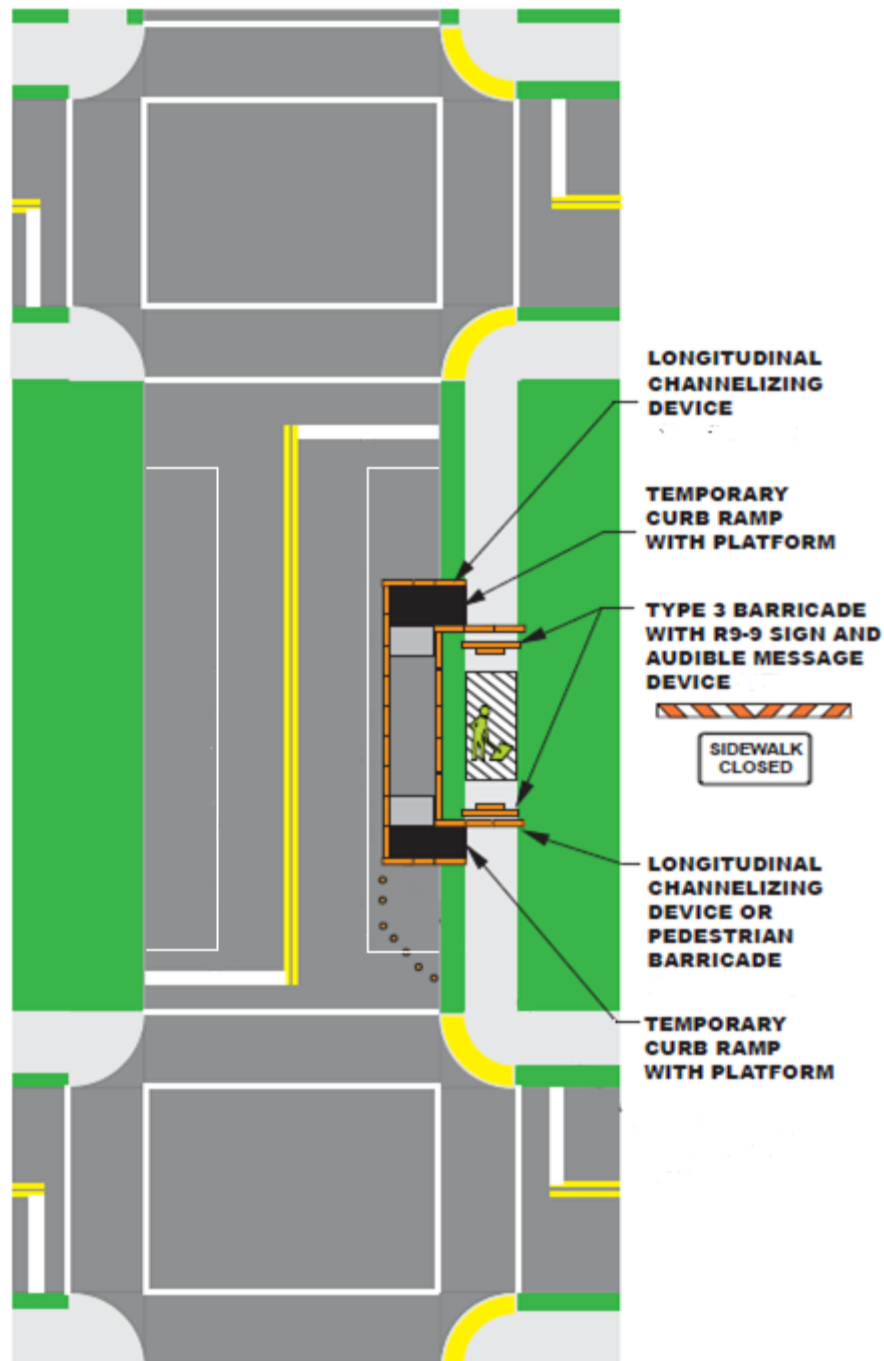
~~activities such as parking for vehicles or the storage of materials or equipment. Proposed traffic control plans shall provide continual, safe and accessible pedestrian pathways for the duration of the project.~~ These sheets are to be provided as “Information Only.” (T&ES)

The following notes shall be included on all Maintenance of Traffic Plan Sheets: (T&ES)

- a. The prepared drawings shall include a statement “FOR INFORMATION ONLY” on all MOT Sheets.
- b. ~~Sidewalk closures will not be permitted for the duration of the project. Temporary sidewalk closures are subject to separate approval from Transportation and Environmental Services (T&ES) at the time of permit application.~~ Sidewalk closures are subject to separate approval from Transportation and Environmental Services (T&ES) at the time of permit application. Pedestrian access must be maintained for the duration of the project. Per Memo to Industry #04-18, pedestrians shall not be diverted across the street without the approval from the Director of Transportation and Environmental Services or his designee.
- c. Contractor shall apply for all necessary permits for uses of the City Right of Way and shall submit MOT Plans with the T&ES Application for final approval at that time. *

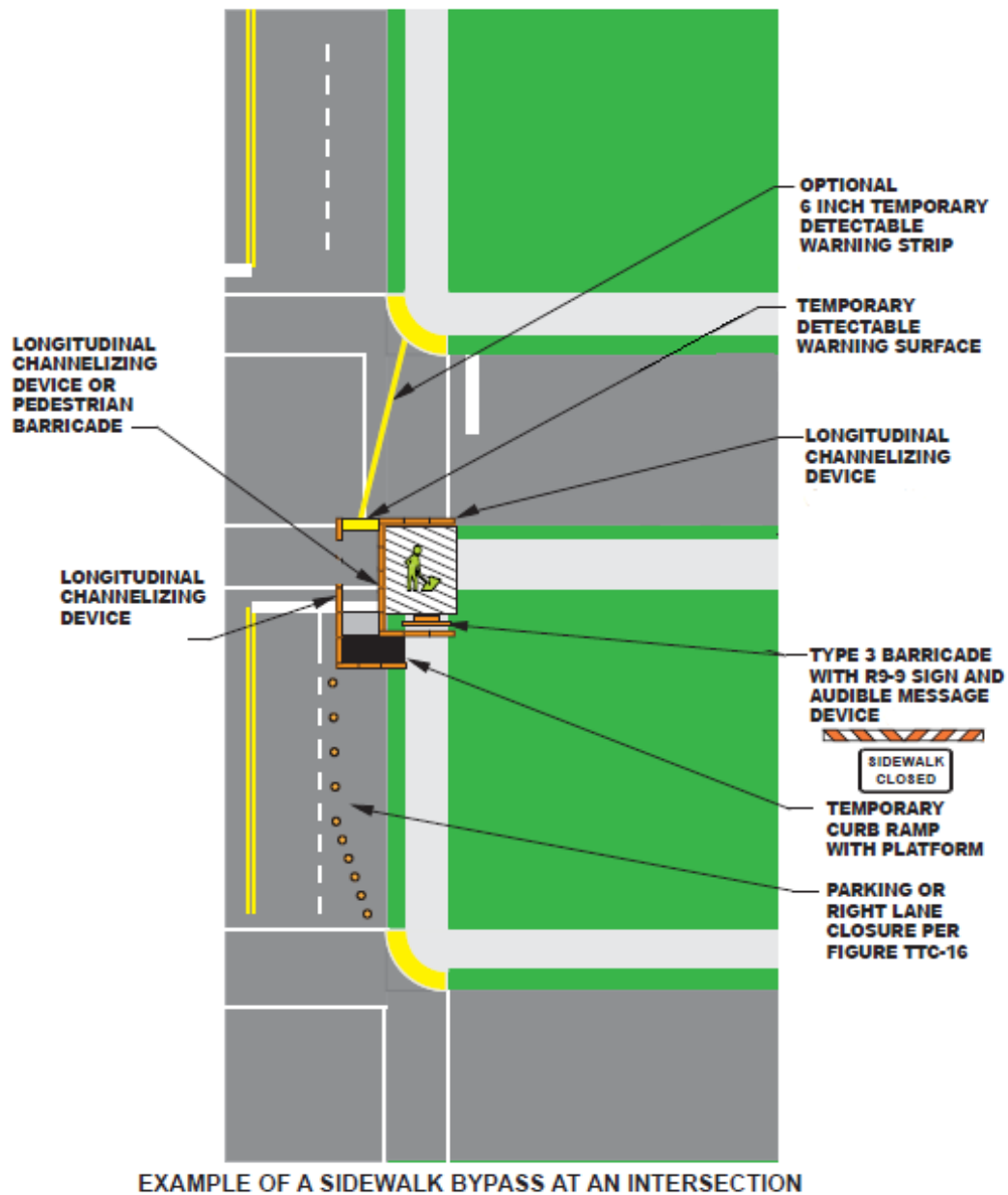
ATTACHMENT 2: Options to Maintain Pedestrian and Bicycle Access during Construction
(images from or modified from *Virginia Department of Transportation Work Zone Pedestrian and Bicycle Guidance*)

Example 1 – Closure at Sidewalk: Pedestrians Access Maintained in Parking Lane

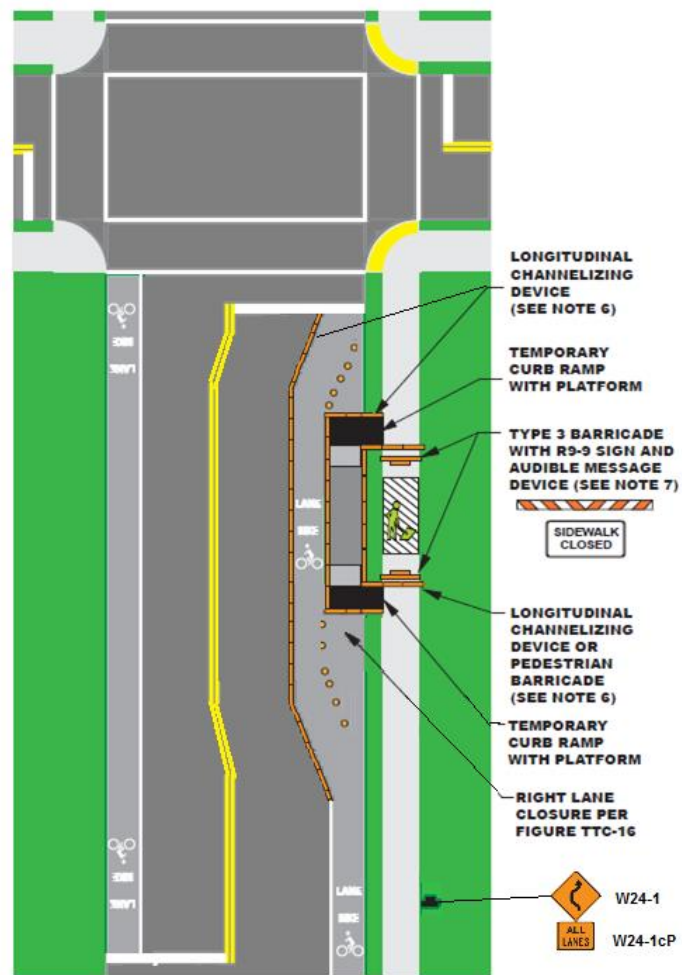


MIDBLOCK PEDESTRIAN DIVERSION

Example 2 – Closure at Sidewalk near Intersection – Pedestrian Access Maintained in Parking Lane

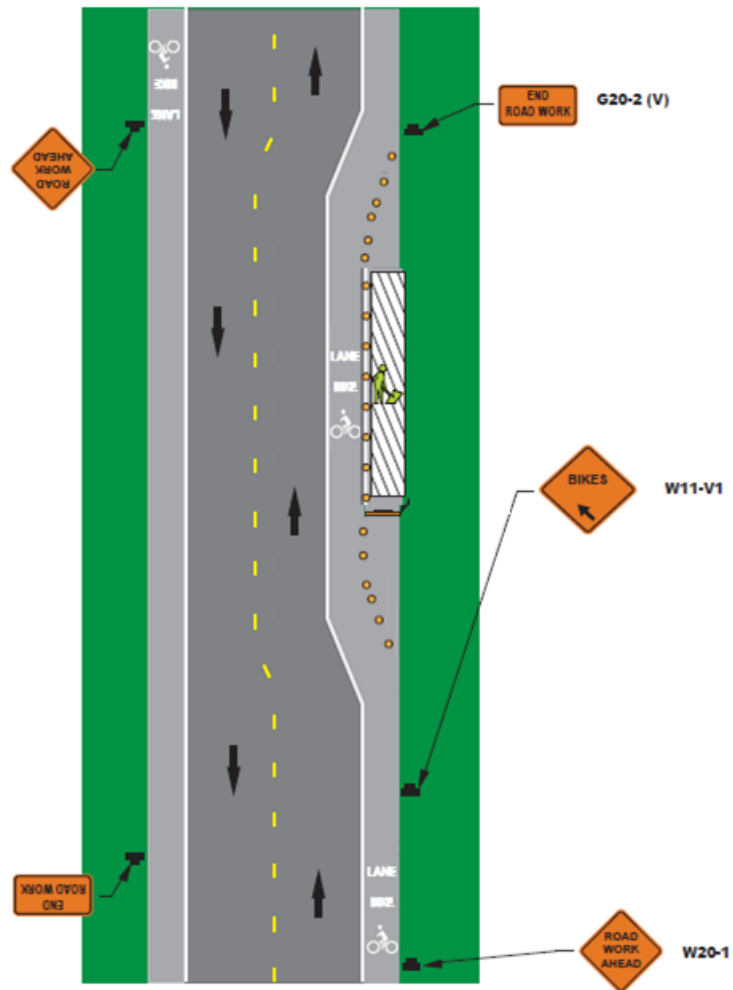


Example 3 – Midblock Sidewalk Closure with Bike Lane – Closure of Parking Lane and Restriping of Travel Lane



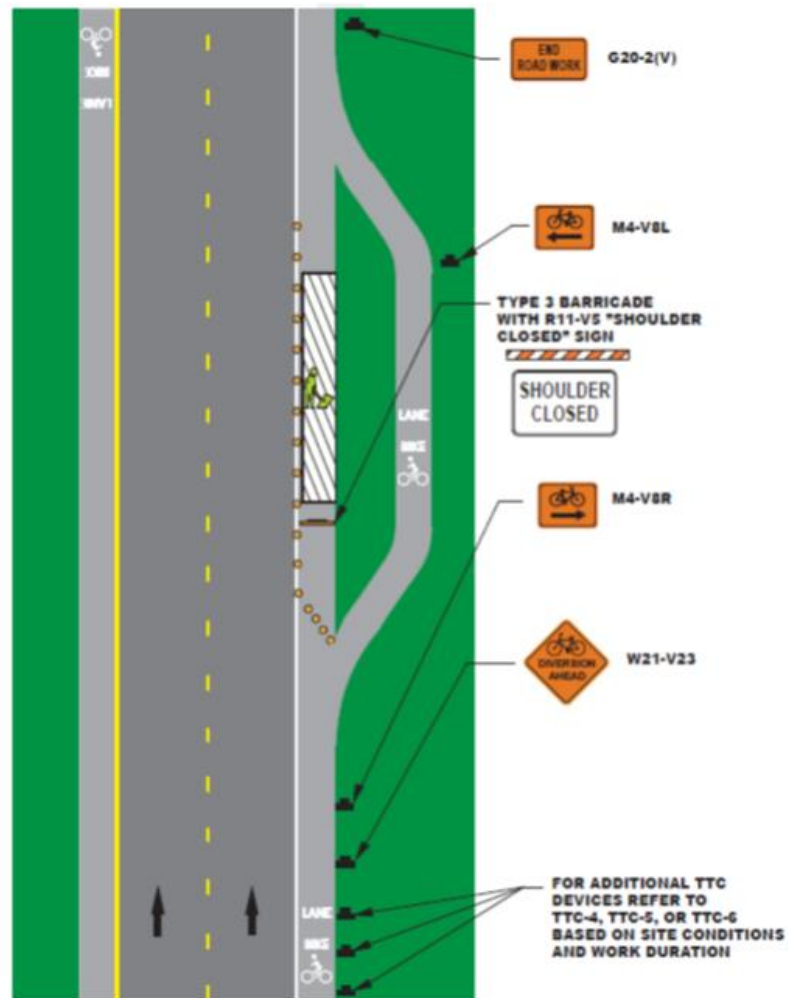
MID-BLOCK DIVERSION OF A SIDEWALK AND BIKE LANE

Example 4 – Closure with Bike Lane – Bicycle Lane/Travel Lane Shift



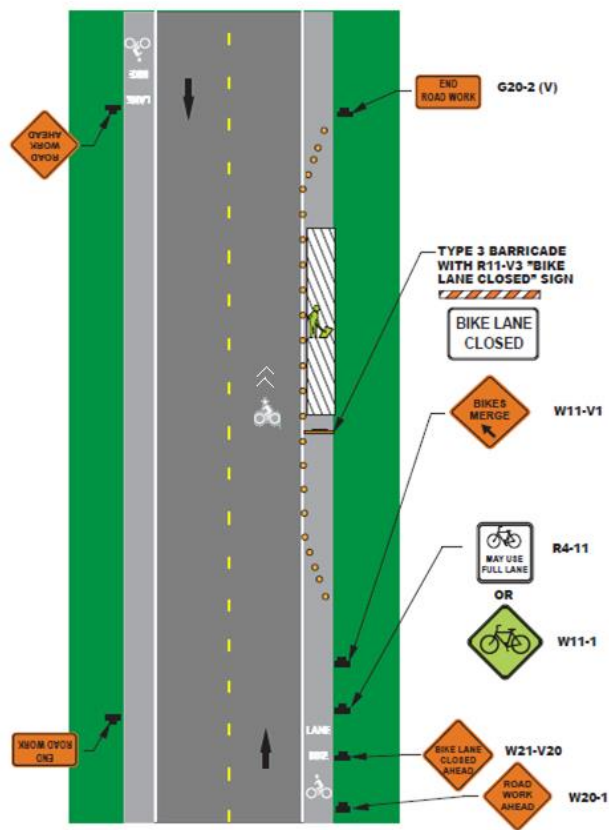
Example of Travel Lane and Bike Lane Shift

Example 5 – Closure with Bike Lane – Temporary Off-Road Diversion



EXAMPLE OF SHOULDER CLOSURE
WITH A BICYCLE DIVERSION PATH

Example 6 – Closure with Bike Lane – Bicycles Diverted into Travel Lane with Signage



ATTACHMENT 3: Complete Streets Guidelines – Lane Widths

Lane Widths

Minimizing travel lane widths is essential to creating additional roadway space for other users. Travel lane width also has an impact on motor vehicle speeds: motorists tend to drive faster in wide travel lanes and slower in narrower lanes. Traditionally, 12' has been the standard for motor vehicle travel lanes. The AASHTO "Green Book" allows 10' travel lanes in low speed environments (45 mph or less). Narrower lane widths have been avoided in the past due to concerns about vehicle occupant safety and congestion, especially on arterial roadways; however, research on suburban and urban arterials has shown that in most cases, travel lane widths between 10 feet and 11' on arterials and collectors do not negatively impact overall motor vehicle safety or operations, and also have no measurable effect on capacity.² The study found one exception where 10' wide travel lanes should be used with caution—on four-lane, undivided arterial roadways.

The benefits of narrower lane widths include:

- Lower speeds, improving the safety of all users
- Fewer, less severe crashes for all users
- Reduced crossing distance for pedestrians
- Reduced footprint of the roadway, resulting in better use of land and reduced run-off

The chart below summarizes guidelines for designating lane widths in the City of Alexandria. The values in this chart should be applied to major street reconstructions as well as resurfacing or other maintenance projects where lane reallocation or resizing may occur.

Many existing residential streets in Alexandria are "yield streets," which are two-way streets with parallel parking on both sides, where oncoming drivers must yield in order pass each other when parked cars are present. These streets are generally 25' in width (curb to curb dimension) and carry traffic volumes that do not exceed 1,500 vehicles per day.

STREET TYPOLOGY	MINIMUM ^{3 4 5}	PREFERRED	MAXIMUM
Commercial Connector	10'	11'	12'
Main Street	10'	10'	12'
Neighborhood Residential	9'	10'	10'
Mixed Use Boulevard	10'	10'	12'
Neighborhood Connector	10'	10'	12'
Parkways	10'	10'	11'
Industrial	11'	12'	13'
Shared Streets	N/A	N/A	N/A
Overlays	Minimum	Preferred	Maximum
Bicycle Network Streets	N/A	N/A	N/A
Transit Streets ⁶	11'	11'	12'
Historic Streets and Alleys	N/A	N/A	N/A
Other	Minimum	Preferred	Maximum
Parking Lane	7'	8'	N/A
Two-way left turn lane	10'	12'	12'
Right or left turn lane	9'	10'	11'
Alley (one-way)	N/A	15'	N/A
Alley (two-way)	N/A	18'	N/A

Notes: A design exception may be required for some widths on federal or state-funded projects.

² Potts, Ingrid B., Harwood, Douglas W and Richard, Karen R. Relationship of Lane width to Safety for Urban and Suburban Arterials. Washington, D.C.: Transportation Research Board, 2007.

³ The width of the gutter is included as a part of the total width of the lane. When a travel lane is adjacent to the curb, add 1' to the preferred lane width. When the speed limit is 35 mph or greater, the width of the concrete gutter should not be counted towards the width of the travel lane adjacent to the curb. Additionally, when a travel lane is next to a raised median, a 1' shy distance should be added to the lane width. There should also be a stripe painted around the median.

⁴ On streets with high volumes of heavy vehicles (>8%), one 11-foot wide travel lane should be provided in each direction (generally the curb-side lane).

⁵ A street should not be designed using all minimums.

⁶ For Complete Streets retrofit projects involving a constrained transit street, maintain the existing width of the transit lane.

City of Alexandria, Virginia

MEMORANDUM TO INDUSTRY NO. 03-05

DATE: JULY 20, 2005

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY A. BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING
TRANSPORTATION & ENVIRONMENTAL SERVICES *gab*

SUBJECT: AS-BUILT SEWER DATA FOR DEVELOPMENT PROJECTS

The City of Alexandria has been conducting a GIS sewer mapping project for public storm and sanitary sewers in the City. The collection of this data will enable City staff and consultants working within the City to better access existing information on the City's infrastructure. Once it is completed, this information will be available to private sector engineers for their use on projects within Alexandria.

In order to keep this sewer geodatabase information up to date, the City will be requiring additional information to be provided on as-built development plans relating to storm and sanitary sewers. This additional required information is outlined in detail below. This additional as-built information will be required on all projects with a Completeness Plan submitted on or after August 1st, 2005.

Additional Requirements

As-built information for storm and sanitary sewers is required for the purposes of maintaining the City's sewer geodatabase. The horizontal and vertical **as-built** locations of all storm and sanitary sewer structures shall be submitted as an electronic Excel file in the following format (the format may need to be modified to add additional fields as necessary):

Structure ID	Structure Type	Northing (NAD 83)	Easting (NAD 83)	Invert In (NAVD 88)	Invert Out (NAVD 88)	Top Elevation (NAVD 88)

All development plans will be required to provide the following information on *as-built* drawings:

Benchmarks

- Provide three benchmarks on the drawings with coordinates based on the NAD 83 using Virginia North State Plane Coordinate System.
- Elevations of benchmarks referenced to NAVD 88.

Sanitary Sewers

- Pipe slope
- Pipe diameter
- Pipe material and class
- Diameter of manholes
- Drop connection depth
- Top elevation of all structures
- Inverts in/out of all manholes
- Connections to existing sanitary sewers

Storm Sewers

- Pipe slope
- Pipe diameter
- Pipe material and class
- Inlet type
- Outlet type
- Length of throat
- Endwall or headwall structure type
- Diameter of manholes
- Top elevation of all structures
- Inverts in/out of manholes
- Inverts out of all inlets/catchbasins
- Connections to existing storm drainage structures

This effort on the part of the development industry will allow the City of Alexandria to keep up to date records of the City's sewer systems. This geodatabase will assist everyone who is involved in development work within the City.

If you have any questions, please contact me or Gregory Tate, Site Plan Coordinator, at (703) 838-4318.

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 04-07

DATE: NOVEMBER 16, 2007

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY A. BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING
TRANSPORTATION AND ENVIRONMENTAL SERVICES *EAB*

SUBJECT: GIS SEWER DATA

A City-wide field inventory of sewers was completed by a consultant between July 2004 and March 2006. This sewer data is available in GIS format. CDs containing the GIS sewer data are distributed at the Planning & Zoning Department counter in room 2100, City Hall. P&Z charges a fee of \$50.00 for this data and a GIS User Agreement is required. Sewer data can be viewed on the City's GIS web page: alexandriava.gov/city/planning_zoning/gis/gis_ims.html. The Sewer Viewer displays the City's sanitary and storm network, including pipe geometry, flow direction, manholes and inlets.

The GIS sewer data is neither accurate nor complete and can not be used for construction or design purposes. The data includes two separate collection systems; comprised of a storm drainage system and a sanitary wastewater system. Drainage features are designated with a prefix of "D". Sanitary features are designated with a prefix of "S". The sanitary network is inclusive of the City's combined sewers and consequently the sanitary sewer data includes several water type attributes: combined, sanitary and storm.

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 05-10

DATE: DECEMBER 7, 2010

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY BAKER, P.E., ^{gmb}DEPUTY DIRECTOR/ENGINEERING, TRANSPORTATION
AND ENVIRONMENTAL SERVICES

GWEN WRIGHT, CHIEF, DEVELOPMENT DIVISION ^{gwn}
PLANNING AND ZONING

SUBJECT: UPDATED CERTIFICATE OF OCCUPANCY CHECKLIST AND
REQUIREMENTS

For projects with a Development Site Plan (DSP) or Development Special Use Permit (DSUP), both Transportation and Environmental Services (T&ES) and Planning and Zoning (P&Z) have plan submission requirements that must accompany a request for a Certificate of Occupancy. Previously, T&ES required a 'Partial As-built' and P&Z required a 'Final Location Survey', each submitted to different staff members in separate departments. Staff has consolidated these requirements into one list, the 'Certificate of Occupancy Survey/ Partial As-built' (Attachment 1). This combines the existing plan requirements for both departments on to one list. A landscape as-built is not required with the plan submission for a Certificate of Occupancy, but information regarding required landscape certifications for Final Occupancy can be found online at http://alexandriava.gov/uploadedFiles/recreation/info/040907_land_guidelines.pdf.

New Requirements: Given the increased complexity of phased occupancy submissions, a requirement was added to clearly delineate complete and incomplete site improvements for phased occupancy requests. A statement verifying completion of all DSP or DSUP conditions is also now required prior to issuance of a Certificate of Occupancy.

Plan Submission: Effective immediately, the Occupancy Survey/Partial As-built will be submitted to the Site Plan Coordinator only instead of multiple staff members, providing one point of contact for all Occupancy and As-built plan submissions.

Please note that you must still call Code Administration at 703-746-4200 to schedule your occupancy inspections, and that T&ES and P&Z reviews under the OCC permits will not begin until the Certificate of Occupancy Survey/ Partial As-built is submitted.

If you have any questions, please call Shanna M. Austin, Site Plan Coordinator at 703-746-4064.



CERTIFICATE OF OCCUPANCY SURVEY/ PARTIAL AS-BUILT

Department of Planning and Zoning
Department of Transportation and Environmental Services

Project Name: _____
Project Address: _____
Applicant Name: _____
Applicant Address: _____
Applicant E-mail Address: _____
Site Plan Number: _____

Submit the following materials prior to scheduling a Certificate of Occupancy inspection with the Office of Building and Fire Code Administration. Inspections will be completed within five business days of requesting an inspection and submission of a Certificate of Occupancy Survey.

- _____ Completed and Signed Survey Requirements for Certificate of Occupancy Checklist.
- _____ Five (5) copies of the Certificate of Occupancy Survey to the Department of Transportation and Environmental Services Site Plan Coordinator, 301 King Street, Room 4130, Alexandria, Virginia 22314.
- _____ Statement verifying fulfillment of all Development Site Plan and / or Development Special Use Permit conditions required prior to issuance of a Certificate of Occupancy.

FORMAT REQUIREMENTS FOR EACH SHEET:

- _____ Print size shall not exceed 24" x 36" and all sheets in a set shall be the same size
- _____ Scale
- _____ North point with reference to source of meridian
- _____ Legend of symbols, patterns, and abbreviations used
- _____ Identify adjacent street names on each sheet
- _____ Specify design standards for all improvements

COVER SHEET:

- _____ Vicinity map and sheet index
- _____ Lot number, address and development name
- _____ As-Built zoning tabulations for gross floor area, net floor area, FAR, height, open space and number of units by type
- _____ As-Built number of parking and loading spaces by type (standard, compact or handicap)

SITE IMPROVEMENTS:

- _____ Property lines with dimensions
- _____ Building footprint with dimensions, entrances and setbacks from property lines and other buildings¹

¹ Building footprint should include all protrusions including, but not limited to, bay windows, chimneys, etc.

- _____ Building height²
- _____ Finished floor elevation
- _____ Walls, railings and fences with top and bottom elevations and type identified
- _____ Patios, decks and stoops
- _____ Streets, driveways, sidewalks, curbs, alleys, steps and crosswalks with dimensions and type of material identified
- _____ Location of accessible handicap ramps with slope identified
- _____ Tree wells, landscape strips and planters
- _____ Site amenities: bicycle racks, trash cans, benches, gang mailboxes, etc.
- _____ Parking spaces (standard, compact and handicap) numbered consecutively³
- _____ Loading spaces (number required and number proposed)
- _____ As-built topographic information with elevations at control points sufficient to determine site drainage
- _____ Canopy and clearance height over vehicular drive aisles

UTILITIES:

- _____ Site and street light poles/fixtures
- _____ Transformers, A/C condensers and other above grade utilities
- _____ Location of all underground utilities
- _____ As-built storm and sanitary sewer information; type, size, flow direction, top/invert elevations and % of grade
- _____ Water main size, fire hydrants, standpipes and sprinkler connections

GARAGE SURVEY:

- _____ Limits of underground parking garage
- _____ Overall garage dimensions
- _____ Parking spaces (all numbered consecutively and labeled by type) and drive aisles with dimensions (excluding columns)
- _____ Tabulation of standard, compact and handicap spaces (note van accessible)
- _____ Tabulation of residential, commercial, visitor and carpool spaces
- _____ Location of stairs and/or elevators
- _____ Location of bicycle racks (identify the number of bikes that can be accommodated)

Note: For development projects with phased occupancy, clearly delineate complete and incomplete site improvements.

I certify that I am responsible for the preparation of certificate of occupancy survey being submitted and that the survey is consistent with all prior approvals granted by the City except. I further certify that I have filled out the attached checklist and confirmed that all required information has been provided.

Signature of Engineer/Surveyor

Date of Submission

² Provide note: "Building height measured from average finished grade."


³ Numbering should be continuous and not restart if spaces are in multiple lots or garage levels.

City of Alexandria, Virginia

MEMORANDUM TO INDUSTRY NO. 04-01

DATE: FEBRUARY 2, 2004

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY A. BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING 
TRANSPORTATION & ENVIRONMENTAL SERVICES

SUBJECT: ESI PEER REVIEW PROGRAM CHANGES

Background: The Engineers and Surveyors Institute (ESI) and the City of Alexandria have had a long running contractual relationship to participate in a public/private partnership for the purpose of producing high quality plans. The program is funded by the development industry on a "pay-as-you-go" basis. The program in Alexandria has primarily consisted of a peer review component. Periodically, revisions to the program are made to improve it. This memorandum describes program revisions that are to be implemented February 20, 2004. This new program will apply to any plan with a Final #1 submission on or after February 20th. Each subsequent submission of that plan will also be subject to this new process.

Process: The new program will add a "minimum submission review" to the current ESI process. This will consist of a review of each final plan by an ESI staff engineer using the set of checklists developed jointly by the City of Alexandria and ESI, available on the ESI website (www.esinova.org). This review will take place prior to the final plans being officially submitted to the City. The plan will be submitted to ESI at the Planning & Zoning office in Room 2100 of City Hall. The plan must be accompanied by a deposit check for ESI. The check shall be made out to the City of Alexandria. The standard deposit amount is \$2,000, although larger plans may require an additional deposit. The plan will then be placed in a box for the ESI staff engineer and ESI will be notified that a plan has been submitted for "minimum submission review". Plans received by 1 pm on Thursday will be reviewed by ESI the following Tuesday.

If the plan is found acceptable or acceptable with inserts, the ESI staff engineer will issue an acceptable (or acceptable with inserts) transmittal to the submitting engineer. The submitting engineer will then make an official submittal of the plan, along with a copy of the ESI "acceptable transmittal" to the City of Alexandria. This submittal must include the required number of copies and the final site plan fee. At this time, the plan will be routed by the Planning and Zoning staff and will be scheduled by the Transportation & Environmental Services department for team peer review. The team peer review process will continue to operate the same as it does currently, except the "critical flaws" phase will no longer take place in the peer review. This will now be covered during the "minimal submission review". For plans routed to the Transportation & Environmental Services department by 1 pm on Thursday, the team peer review will be scheduled for the following Tuesday. An agenda for the scheduled team reviews

will be published and distributed by City staff by email and/or FAX to all participants by Friday afternoon each week. Participants are expected to attend the review at the time designated to avoid the waste of City staff and other participants' time.

If the plan is found non-acceptable during the "minimum submission review", it will be returned to the applicant by transmittal. The plan may be resubmitted as early as the following week, subject to the Thursday 1 pm deadline. ESI members that submit plans that are found non-acceptable may be subject to investigation by ESI.

All submitted plans will be required to follow this process, not just those submitted by ESI member firms. From time to time, the ESI Alexandria Committee may prescribe adjustments to the details of this process. Those adjustments will be made available through Committee minutes, publications and/or the ESI website. Public or private sector participants are encouraged to identify any difficulties that are experienced with this new process by contacting Terry Ryan and/or the ESI Alexandria Committee.

Program Objectives: This new program is being implemented to meet several objectives by both the City of Alexandria and ESI. These program objectives are:

- To improve the quality of the plans such that approvals can be given by the end of second submission review.
- To improve the predictability of the plan review and approval process.
- To increase the review and approval teamwork between submitter and review staff,
- To establish a methodology that will lead to predictable, consistent, repeatable, and economical review and approval results.

The City of Alexandria has committed to meeting a four week review turnaround for first final submission plans, and a three week review turnaround for subsequent final submission plans. This turnaround is from the time the final plans are officially submitted to the City and the site plan fee is paid to the City. We believe this new "minimum submission review" process will help ensure that the City is provided with high quality, complete plans for review. This will enable the City to meet these short turnaround commitments.

On behalf of the ESI Alexandria Committee, we encourage your diligent participation in this new process. Together, the ESI public/private partnership can ensure high quality professional results.

cc: Richard J. Baier, P.E., Director, Transportation & Environmental Services
Geoff Byrd, Site Plan Coordinator
Eileen Fogerty, Director, Planning & Zoning
Jeffrey Farner, Division Chief, Planning & Zoning


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 02-11

DATE: MARCH 28, 2011

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING, 
TRANSPORTATION AND ENVIRONMENTAL SERVICES

SUBJECT: ESI PEER REVIEW PROGRAM CHANGES

Background: The Engineers and Surveyors Institute (ESI) and the City of Alexandria have had a long running contractual relationship to participate in a public/private partnership for the purpose of producing high quality plans. Periodically, changes are made to streamline and improve the program. The revisions outlined below will take effect June 1, 2011.

Process: Minimum Submission Review (MSR) plans submitted after June 1, 2011 may be delivered directly to ESI at 4460 Brookfield Corporate Drive, Suite A, Chantilly, Virginia, 20151 or submitted to City Hall, as is currently required. For either option, all ESI fees must be paid at the time of submission for the MSR review to take place. If the plans are sent directly to ESI, payment shall be sent separately to the City at 301 King Street, Room 4130, Alexandria, Virginia, 22314. Confirmation of payment will be required by the City prior to ESI commencing the MSR review. Expanding the options for submittal will provide Applicants and Engineers with greater flexibility to manage their submissions for ESI review and expedite the receipt of MSR determination. MSR plans submitted directly to the City by 1:00 pm Thursday will receive a determination of Acceptable, Acceptable with Inserts or Unacceptable by close of business on the following Thursday. MSR plans submitted directly to ESI will receive a determination within 48 hours of receipt of plans and confirmation of payment to the City.

In addition, First Final Site Plans submitted after June 1, 2011 will have the ESI Peer Review meeting scheduled during the second full week of staff review instead of the first. This will allow staff more time to review the plan prior to the Peer Review and will allow for a more substantial and meaningful meeting with City Staff, applicant and ESI Peer Reviewers. Submission deadlines and turn-around time for receiving City review comments will not change.

We believe that these changes will benefit the submission and review process of Final Site Plans in the City. If you have any questions, please contact me or Shanna Austin, Site Plan Coordinator, at (703) 746-4064.

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 01-08

DATE: MAY 2, 2008

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY A. BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING
TRANSPORTATION & ENVIRONMENTAL SERVICES



SUBJECT: ESI PEER REVIEW DEPOSIT CHANGE

Effective immediately, the standard deposit amount for ESI Peer Review is \$5,000, although larger plans may require an additional deposit. Deposits are to be in the form of a check made payable to the City of Alexandria and submitted with the Minimum Submission Review to the Planning and Zoning Department. This change in process will help ensure that the City is providing the most efficient service to complete reviews for site plans.

cc: Richard J. Baier, P.E., Director, Transportation & Environmental Services
Shanna Sizemore, Site Plan Coordinator
Jeffery Farner, Division Chief, Planning & Zoning


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 02-15

DATE: SEPTEMBER 12, 2014

TO: DEVELOPERS, CONTRACTORS, ENGINEERS, ARCHITECTS,
SURVEYORS, AND APPLICANTS

FROM: WILLIAM SKRABAK, DEPUTY DIRECTOR
INFRASTRUCTURE/ ENVIRONMENTAL QUALITY DIVISION 
TRANSPORTATION AND ENVIRONMENTAL SERVICES

SUBJECT: PERMIT FEE INCREASE

On May 1, 2014, City Council adopted resolution #2614 which increased the Right of Way Permit fee to \$125. This fee increase pertains to right of way usage only; all other Transportation & Environmental Services permit fees are not affected. This fee increase will be effective October 1, 2014.

If you have any questions, you may call the Permit Office at 703.746.4035.

Attachment



PERMIT FEE INFORMATION

TRANSPORTATION & ENVIRONMENTAL SERVICES CONSTRUCTION MANAGEMENT & INSPECTION DIVISION

FOR ADDITIONAL INFORMATION REGARDING PERMITS
AND PERMIT FEES

CALL THE PERMIT OFFICE AT 703-746-4035

** NOTE: PERMIT DURATION IS 1 DAY TO A MAXIMUM OF 30 DAYS

PARKING FEES ASSOCIATED WITH ANY OF THE FOLLOWING PERMITS ARE ADDITIONAL

PERMIT TYPE	FEE	** DURATION
Close Sidewalk	\$125	** 30 Days
Crane/Manlift	\$125	** 30 Days
Cross Curb, Gutter & Sidewalk	\$125	** 30 Days
Dumpster/Pod/Packing Crate/Trailer for Moving	\$125	** 30 Days
Excavation	\$250 Per Block	** 30 Days
Hauling	\$125	** 30 Days
Horse & Carriage	\$125	Per Month
Ingress and Egress	\$125	** 30 Days
Ladder/Scaffold	\$125	** 30 Days
Lane Closure	\$125	** 30 Days
Noise (Construction)	\$50	Per Event
Noise (Music)	\$20	Per Event
Nonpermanent Planter	\$125	Per Month
Over Weight and/or Over Size Vehicle	\$30	Per Day
Pedicab/Rickshaw	\$125	Per Month
Sewer Lateral Connection	\$125	Per Connection
Solicitation of Funds	\$125	Per Event
Solid Waste Containers (1-10 CY)	\$3	Fiscal Year
Solid Waste Containers (10-40 CY)	\$5	Fiscal Year
Solid Waste Hauling (Per Pick-up Truck)	\$150	Fiscal Year
Solid Waste Hauling (Per Mechanized & Non-Mechanized)	\$300	Fiscal Year
Special Event (Parade, Race, Walk-a-Thon, etc.)	\$125	Per Event
Stockpile Materials	\$125	** 30 Days
Street Closure for Block Party	\$125	Per Event
Street Closure for Construction	\$125	Per Event
Temporary Fence	\$125	** 30 Days
Trailer for Construction	\$125	** 30 Days
Waiver of Underground Ordinance	\$100	Per Application
PARKING	FEE	DURATION
Metered Spaces	\$40	Per Meter, Per Day
Non-Metered Spaces	\$30	Per Space, Per Day
Cover NO PARKING Signs	\$10	Per Sign, Per Day
NOTE: 1 PARKING SPACE IS 20 FEET		


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 03-13

DATE: JUNE 11, 2013

TO: DEVELOPERS, CONTRACTORS, ENGINEERS, ARCHITECTS,
SURVEYORS, AND APPLICANTS

FROM: EMILY A. BAKER, P.E., CITY ENGINEER 
TRANSPORTATION & ENVIRONMENTAL SERVICES

SUBJECT: PERMIT FEE INCREASE

On May 6, 2013, City Council adopted resolution #2555 which includes increases to the excavation permit fee and reserved parking fees. These fee increases will be effective July 1, 2013.

Excavation permits will be \$250.00 per block for a period of 30 days or less.

Non-metered parking spaces will be \$30.00 per space, per day.

Metered parking spaces will be \$40.00 per space per day.

If you have any questions, you may call the Permit Office at 703.746.4035.

Attachment



PERMIT FEE INFORMATION

TRANSPORTATION & ENVIRONMENTAL SERVICES CONSTRUCTION MANAGEMENT & INSPECTION DIVISION

FOR ADDITIONAL INFORMATION REGARDING PERMITS
AND PERMIT FEES

CALL THE PERMIT OFFICE AT 703-746-4035

**** NOTE: PERMIT DURATION IS 1 DAY TO A MAXIMUM OF 30 DAYS**

PARKING FEES ASSOCIATED WITH ANY OF THE FOLLOWING PERMITS ARE ADDITIONAL

PERMIT TYPE	FEE	** DURATION
Close Sidewalk	\$100	** 30 Days
Crane/Manlift	\$100	** 30 Days
Cross Curb, Gutter & Sidewalk	\$100	** 30 Days
Dumpster/Pod/Packing Crate/Trailer for Moving	\$100	** 30 Days
Excavation	\$250 Per Block	** 30 Days
Hauling	\$100	** 30 Days
Horse & Carriage	\$100	Per Month
Ingress and Egress	\$100	** 30 Days
Ladder/Scaffold	\$100	** 30 Days
Lane Closure	\$100	** 30 Days
Noise (Construction)	\$50	Per Event
Noise (Music)	\$20	Per Event
Nonpermanent Planter	\$100	Per Month
Over Weight and/or Over Size Vehicle	\$30	Per Day
Pedicab/Rickshaw	\$100	Per Month
Sewer Lateral Connection	\$100	Per Connection
Solicitation of Funds	\$100	Per Event
Solid Waste Containers (1-10 CY)	\$3	Fiscal Year
Solid Waste Containers (10-40 CY)	\$5	Fiscal Year
Solid Waste Hauling (Per Pick-up Truck)	\$150	Fiscal Year
Solid Waste Hauling (Per Mechanized & Non-Mechanized)	\$300	Fiscal Year
Special Event (Parade, Race, Walk-a-Thon, etc.)	\$100	Per Event
Stockpile Materials	\$100	** 30 Days
Street Closure for Block Party	\$100	Per Event
Street Closure for Construction	\$100	Per Event
Temporary Fence	\$100	** 30 Days
Trailer for Construction	\$100	** 30 Days
Waiver of Underground Ordinance	\$100	Per Application
PARKING	FEE	DURATION
Metered Spaces	\$40	Per Meter, Per Day
Non-Metered Spaces	\$30	Per Space, Per Day
Cover NO PARKING Signs	\$10	Per Sign, Per Day
NOTE: 1 PARKING SPACE IS 20 FEET		


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 02-09

DATE: JUNE 3, 2009

TO: DEVELOPERS, CONTRACTORS, ENGINEERS, ARCHITECTS, SURVEYORS,
AND APPLICANTS

FROM: EMILY A. BAKER, P.E., ACTING DIRECTOR 
TRANSPORTATION & ENVIRONMENTAL SERVICES

SUBJECT: PERMIT FEE INCREASE

On May 12, 2009, City Council approved an increase in T & ES permit fees. Effective July 1, 2009, the cost for excavation permits will be \$150.00 per block for a maximum 30 day period. This fee applies to permits issued for any part, or all, of a 30 day period. If the work covered by the permit is not completed within the 30 day period, you may apply for a new permit to cover up to an additional 30 days. The same fees will apply to the new permit.

The cost for right-of-way permits will be \$45.00 for a maximum 30 day period. This fee applies to permits issued for any part, or all, of a 30 day period. If the work covered by the permit is not completed within the 30 day period, you may apply for a new permit to cover the additional time required, up to 30 days. The \$45.00 fee will apply to the new permit. See the attached fee schedule.

If you have any questions, you may call 703-746-4035.

Attachment



PERMIT FEE INFORMATION

TRANSPORTATION & ENVIRONMENTAL SERVICES CONSTRUCTION & INSPECTION DIVISION

FOR ADDITIONAL INFORMATION REGARDING PERMITS
AND PERMIT FEES
CALL THE PERMIT OFFICE AT 703-746-4035

**** NOTE: PERMIT DURATION IS 1 DAY TO A MAXIMUM OF 30 DAYS**

PARKING FEES ASSOCIATED WITH ANY OF THE FOLLOWING PERMITS ARE ADDITIONAL

PERMIT TYPE	FEE	** DURATION
Close Sidewalk	\$45	** 30 Days
Crane/Manlift	\$45	** 30 Days
Cross Curb, Gutter & Sidewalk	\$45	** 30 Days
Dumpster/Pod/Packing Crate/Trailer for Moving	\$45	** 30 Days
Excavation	\$150 Per Block	** 30 Days
Hauling	\$45	** 30 Days
Horse & Carriage	\$45	Per Month
Ingress and Egress	\$45	** 30 Days
Ladder/Scaffold	\$45	** 30 Days
Lane Closure	\$45	** 30 Days
Noise (Construction)	\$50	Per Event
Noise (Music)	\$20	Per Event
Nonpermanent Planter	\$45	Per Month
Over Weight and/or Over Size Vehicle	\$30	Per Day
Pedicab/Rickshaw	\$45	Per Month
Solicitation of Funds	\$45	Per Event
Solid Waste Containers (1-10 CY)	\$3	Fiscal Year
Solid Waste Containers (10-40 CY)	\$5	Fiscal Year
Solid Waste Hauling (Per Pick-up Truck)	\$150	Fiscal Year
Solid Waste Hauling (Per Mechanized & Non-Mechanized)	\$200	Fiscal Year
Special Event (Parade, Race, Walk-a-Thon, etc.)	\$45	Per Event
Stockpile Materials	\$45	** 30 Days
Street Closure for Block Party	\$45	Per Event
Street Closure for Construction	\$45	Per Event
Temporary Fence	\$45	** 30 Days
Trailer for Construction	\$45	** 30 Days
Waiver of Underground Ordinance	\$100	Per Application
PARKING	FEE	DURATION
Metered Spaces	\$15	Per Meter, Per Day
Non-Metered Spaces	\$10	Per Space, Per Day
Cover NO PARKING Signs	\$10	Per Sign, Per Day
NOTE: 1 PARKING SPACE IS 20 FEET		


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 01-15

DATE: JULY 7, 2014

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: MAURICE DALY, P.E., DIVISION CHIEF, INFRASTRUCTURE/RIGHT OF WAY DIVISION, TRANSPORTATION AND ENVIRONMENTAL SERVICES 

SUBJECT: SANITARY SEWER CONNECTION FEES FOR FY2015
CITY CODE SECTION 5-6-25.1

Effective for Final Site Plans and Grading Plans submitted after July 1, 2014, the sanitary sewer connection fees are hereby increased as outlined in the revised fee schedule below. The submission date shall be determined by the date that the Final 1 Site Plan or initial Grading Plan was received. For Site Plans, please note that the date the plan was submitted to ESI for minimum submission review is not the same as the Final 1 Submission Date.

Tear-down credits: For connections that involve the removal of an existing structure with an existing tap, a credit will be provided, equal to 50 percent of the current fee that would be applied to the structure(s) being removed. For mixed use properties, the credit will be based on the sum of the residential credit and nonresidential credit, in accordance with Section 5-6-25.1 of the City Code. The credit shall only apply to properties removed or demolished not longer than three years prior to the submission of the final site plan or grading plan for the new structure.

For FY 2015: July 1, 2014 through June 30, 2015:

- **\$8,641.00;** single-family detached, semi-detached, duplex or townhouse
- **\$7,777.00;** per dwelling unit; multi-family building, i.e. condominium apartments (90% of Single-family rate)
- **\$7,777.00;** per unit; hotel/motel (90% of Single-family rate)

Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property. The fee chart is located on Page 2.

Fee Chart for Nonresidential Property

<i>Meter Size (inches)</i>	<i>Maximum Capacity (GPM)</i>	<i>3/4" Meter Equivalent</i>	<i>Fee</i>
3/4 or smaller	30	1.00	\$8,641
1	50	1.67	\$14,430
1 1/2	100	3.33	\$28,775
2	160	5.33	\$46,057
3	320	10.76	\$92,977
4	500	16.67	\$144,045
6	1000	33.33	\$288,005
8	1600	53.33	\$460,825
10	2300	76.67	\$662,505

The sanitary sewer connection fee increases reflect the requirements of City Code Section 5-6-25.1. This section of the City Code was amended by the Alexandria City Council on May 18, 2013. On July 1 of fiscal years 2016 and beyond, these fees shall be increased by the annual rate of inflation as determined by the CPI-U for the Washington, DC-MD-VA-WVA Combined Statistical Area. For Fiscal Year 2015 an increase of 1.6% was used based on the CPI-U rate from March 2013 to March 2014.

If you have any questions, please contact me or the Development Coordinator, at (703)-746-4064.


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 01-16

DATE: JULY 14, 2015

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: MAURICE DALY, P.E., DIVISION CHIEF, INFRASTRUCTURE/RIGHT OF WAY DIVISION, TRANSPORTATION AND ENVIRONMENTAL SERVICES 

SUBJECT: SANITARY SEWER CONNECTION FEES FOR FY2016
CITY CODE SECTION 5-6-25.1

Effective for Final Site Plans and Grading Plans submitted after July 1, 2015, the sanitary sewer connection fees are hereby increased as outlined in the revised fee schedule below. The submission date shall be determined by the date that the Final 1 Site Plan or initial Grading Plan was received. For Site Plans, please note that the date the plan was submitted to ESI for minimum submission review is not the same as the Final 1 Submission Date.

Tear-down credits: For connections that involve the removal of an existing structure with an existing tap, a credit will be provided, equal to 50 percent of the current fee that would be applied to the structure(s) being removed. For mixed use properties, the credit will be based on the sum of the residential credit and nonresidential credit, in accordance with Section 5-6-25.1 of the City Code. The credit shall only apply to properties removed or demolished not longer than three years prior to the submission of the final site plan or grading plan for the new structure.

For FY 2016: July 1, 2015 through June 30, 2016:

- **\$8,658.00;** single-family detached, semi-detached, duplex or townhouse
- **\$7,792.00;** per dwelling unit; multi-family building, i.e. condominium apartments (90% of Single-family rate)
- **\$7,792.00;** per unit; hotel/motel (90% of Single-family rate)

Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property. The fee chart is located on Page 2.

Fee Chart for Nonresidential Property

<i>Meter Size (inches)</i>	<i>Maximum Capacity (GPM)</i>	<i>3/4" Meter Equivalent</i>	<i>Fee</i>
3/4 or smaller	30	1.00	\$8,658
1	50	1.67	\$14,459
1 1/2	100	3.33	\$28,832
2	160	5.33	\$46,149
3	320	10.76	\$93,163
4	500	16.67	\$144,334
6	1000	33.33	\$288,581
8	1600	53.33	\$461,746
10	2300	76.67	\$663,830

The sanitary sewer connection fee increases reflect the requirements of City Code Section 5-6-25.1. This section of the City Code was amended by the Alexandria City Council on May 18, 2013. On July 1 of fiscal years 2017 and beyond, these fees shall be increased by the annual rate of inflation as determined by the CPI-U for the Washington, DC-MD-VA-WVA Combined Statistical Area. For Fiscal Year 2016 an increase of 0.2% was used based on the CPI-U rate from March 2014 to March 2015.

If you have any questions, please contact me or the Development Coordinator, at (703)-746-4064.


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 01-17

DATE: JULY 18, 2016

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: LISA JAATINEN, P.E., ACTING DIVISION CHIEF, 
INFRASTRUCTURE/RIGHT OF WAY DIVISION, TRANSPORTATION AND
ENVIRONMENTAL SERVICES

SUBJECT: SANITARY SEWER CONNECTION FEES FOR FY2017
CITY CODE SECTION 5-6-25.1

Effective for Final Site Plans and Grading Plans submitted after July 1, 2016, the sanitary sewer connection fees are hereby increased as outlined in the revised fee schedule below. The submission date shall be determined by the date that the Final 1 Site Plan or initial Grading Plan was received. For Site Plans, please note that the date the plan was submitted to ESI for Minimum Submission Review is not the same as the Final 1 Submission Date.

Tear-down credits: For connections that involve the removal of an existing structure with an existing tap, a credit will be provided, equal to 50 percent of the current fee that would be applied to the structure(s) being removed. For mixed use properties, the credit will be based on the sum of the residential credit and nonresidential credit, in accordance with Section 5-6-25.1 of the City Code. The credit shall only apply to properties removed or demolished not longer than three years prior to the submission of the final site plan or grading plan for the new structure.

Conversions/changes in use: For an existing property that changes its use, in accordance with Section 5-6-25.1, such as from non-residential to residential (or vice versa) and which uses the same sewer connection (tap), then the fee shall be calculated based on the net increase in usage between the existing and proposed uses. In this case, "usage" refers to the use of the property and the connection fee is calculated by subtracting fee associated with the existing use from the fee associated with the proposed use by applying the fees below.

For FY 2016: July 1, 2016 through June 30, 2017:

- **\$8,745.00;** single-family detached, semi-detached, duplex or townhouse
- **\$7,870.00;** per dwelling unit; multi-family building, i.e. condominium apartments (90% of Single-family rate)
- **\$7,870.00;** per unit; hotel/motel (90% of Single-family rate)

Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property. The fee chart is located on Page 2.

Fee Chart for Nonresidential Property

<i>Meter Size (inches)</i>	<i>Maximum Capacity (GPM)</i>	<i>3/4" Meter Equivalent</i>	<i>Fee</i>
3/4 or smaller	30	1.00	\$8,745
1	50	1.67	\$14,604
1 1/2	100	3.33	\$29,120
2	160	5.33	\$46,610
3	320	10.76	\$94,095
4	500	16.67	\$145,777
6	1000	33.33	\$291,467
8	1600	53.33	\$466,363
10	2300	76.67	\$670,468

The sanitary sewer connection fee increases reflect the requirements of City Code Section 5-6-25.1. This section of the City Code was amended by the Alexandria City Council on May 18, 2013. On July 1 of fiscal years 2018 and beyond, these fees shall be increased by the annual rate of inflation as determined by the CPI-U for the Washington, DC-MD-VA-WVA Combined Statistical Area. For Fiscal Year 2017 an increase of 1.0% was used based on the CPI-U rate from March 2015 to March 2016.

If you have any questions, please contact me or the Development Coordinator, at (703)-746-4064.

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO.

DATE. OCTOBER 15 2009

TO. DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM. EMILY BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING,
TRANSPORTATION AND ENVIRONMENTAL SERVICES

SUBJECT SANITARY SEWER TAP FEES For FY 2010
CITY CODE SECTION 5-6-25 1

Effective for final site plans and grading plans submitted after April 1 2009 the sanitary sewer tap fees are hereby increased as outlined in the revised fee schedule below

- \$ **\$7,766.00**; single-family detached, semi-detached, duplex or townhouse.
- \$ **\$3,883.00** per dwelling unit; multi-family building, i.e. condominiums apartments, hotel/motel.
- \$ Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property The fee chart is located below

Fee Chart for Nonresidential Property

<i>Meter Size (inches)</i>	<i>Maximum Capacity (GPM)</i>	<i>3/4" Meter Equivalent</i>	<i>Fee</i>
3/4 or smaller	30	1.00	\$7,766
1	50	1.67	\$12,969
1 1/2	100	3.33	\$25,861
2	160	5.33	\$41,393
3	320	10.76	\$83,562
4	500	16.67	\$129,459
6	1000	33.33	\$258,841
8	1600	53.33	\$414,161
10	2300	76.67	\$595,419

The sanitary sewer tap fee increases reflect the requirements of City Code Section 5-6-25 1

This section of the City Code was amended by the Alexandria City Council on May 5 2008. On July 1 of fiscal years 2009 2010 and 2011 these fees shall be increased by the annual rate of inflation as determined by the CPI-U for the Washington, DC-MD-VA WVA Combined Statistical Area. Upon completion of the City's sanitary sewer capacity study a new fee proposal will be developed.

If you have any questions, please contact me or the Site Plan Coordinator, at (703)-746-4064

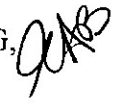
City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 03-10

DATE. MAY 20, 2010

TO. DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM. EMILY BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING,
TRANSPORTATION AND ENVIRONMENTAL SERVICES 

SUBJECT. SANITARY SEWER TAP FEES FOR FY2011
CITY CODE SECTION 5-6-25 1

Effective for final site plans and grading plans submitted after April 1 2010, the sanitary sewer tap fees are hereby increased as outlined in the revised fee schedule below

- **\$7,937.00**; single-family detached, semi-detached, duplex or townhouse.
- **\$3,968.00** per dwelling unit; multi-family building, i.e. condominiums apartments, hotel/motel.
- Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property The fee chart is located below

Fee Chart for Nonresidential Property

<i>Meter Size (inches)</i>	<i>Maximum Capacity (GPM)</i>	<i>3/4" Meter Equivalent</i>	<i>Fee</i>
3/4 or smaller	30	1.00	\$7,937
1	50	1.67	\$13,254
1 1/2	100	3.33	\$26,430
2	160	5.33	\$42,304
3	320	10.76	\$85,400
4	500	16.67	\$132,307
6	1000	33.33	\$264,536
8	1600	53.33	\$423,273
10	2300	76.67	\$608,518

The sanitary sewer tap fee increases reflect the requirements of City Code Section 5-6-25 1

This section of the City Code was amended by the Alexandria City Council on May 5 2008. On July 1 of fiscal years 2009 2010 and 2011 these fees shall be increased by the annual rate of inflation as determined by the CPI-U for the Washington, DC-MD-VA WVA Combined Statistical Area.

If you have any questions, please contact me or the Site Plan Coordinator, at (703)-746-4064


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 01-11

DATE: JULY 18, 2011

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING,
TRANSPORTATION AND ENVIRONMENTAL SERVICES 

SUBJECT: SANITARY SEWER TAP FEES FOR FY2012
CITY CODE SECTION 5-6-25.1

Effective for final site plans and grading plans submitted after April 1, 2011, the sanitary sewer tap fees are hereby increased as outlined in the revised fee schedule below.

- **\$8,175.00**; single-family detached, semi-detached, duplex or townhouse.
- **\$4,087.00** per dwelling unit; multi-family building, i.e. condominiums apartments, hotel/motel.
- Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property. The fee chart is located below:

Fee Chart for Nonresidential Property

<i>Meter Size (inches)</i>	<i>Maximum Capacity (GPM)</i>	<i>3/4" Meter Equivalent</i>	<i>Fee</i>
3/4 or smaller	30	1.00	\$8,175
1	50	1.67	\$13,652
1 1/2	100	3.33	\$27,223
2	160	5.33	\$43,573
3	320	10.76	\$87,962
4	500	16.67	\$136,276
6	1000	33.33	\$272,472
8	1600	53.33	\$435,971
10	2300	76.67	\$626,773

The sanitary sewer tap fee increases reflect the requirements of City Code Section 5-6-25.1.

This section of the City Code was amended by the Alexandria City Council on June 25, 2011. On July 1 of fiscal years 2012 and beyond, these fees shall be increased by the annual rate of inflation as determined by the CPI-U for the Washington, DC-MD-VA-WVA Combined Statistical Area.

If you have any questions, please contact me or the Site Plan Coordinator, at (703)-746-4064.


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 02-12

DATE: MAY 01, 2012

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING, 
TRANSPORTATION AND ENVIRONMENTAL SERVICES

SUBJECT: SANITARY SEWER TAP FEES FOR FY2013
CITY CODE SECTION 5-6-25.1

Effective for final site plans and grading plans submitted after April 1, 2012, the sanitary sewer tap fees are hereby increased as outlined in the revised fee schedule below.

- **\$8,404.00**; single-family detached, semi-detached, duplex or townhouse.
- **\$4,201.00** per dwelling unit; multi-family building, i.e. condominiums apartments, hotel/motel.
- Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property. The fee chart is located below:

Fee Chart for Nonresidential Property

<i>Meter Size (inches)</i>	<i>Maximum Capacity (GPM)</i>	<i>3/4" Meter Equivalent</i>	<i>Fee</i>
3/4 or smaller	30	1.00	\$8,404
1	50	1.67	\$14,034
1 1/2	100	3.33	\$27,985
2	160	5.33	\$44,793
3	320	10.76	\$90,425
4	500	16.67	\$140,092
6	1000	33.33	\$280,101
8	1600	53.33	\$448,178
10	2300	76.67	\$644,323

The sanitary sewer tap fee increases reflect the requirements of City Code Section 5-6-25.1. This section of the City Code was amended by the Alexandria City Council on June 25, 2011. On July 1 of fiscal years 2012 and beyond, these fees shall be increased by the annual rate of inflation as determined by the CPI-U for the Washington, DC-MD-VA-WVA Combined Statistical Area. For this memo an increase of 2.8% was used based on the CPI-U rate from March 2011 to March 2012.

If you have any questions, please contact me or the Site Plan Coordinator, at (703)-746-4064.


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 01-14

DATE: JULY 08, 2013

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING,
TRANSPORTATION AND ENVIRONMENTAL SERVICES 

SUBJECT: SANITARY SEWER TAP FEES FOR FY2014
CITY CODE SECTION 5-6-25.1

Effective for Final Site Plans and Grading Plans submitted after July 1, 2013, the sanitary sewer tap fees are hereby increased as outlined in the revised fee schedule below. The submission date shall be determined by the date that the Final 1 Site Plan or initial Grading Plan was received. For Site Plans, please note that the date the plan was submitted to ESI for minimum submission review is not the same as the Final 1 Submission Date.

For FY 2014: July 1, 2013 through June 30, 2014:

For Plans with Final 1 submitted on or after July 1, 2013 through August 31, 2013 the fee will be applied as follows:

- **\$8,505.00**; single-family detached, semi-detached, duplex or townhouse
- **\$4,253.00** per dwelling unit; multi-family building, i.e. condominium apartments (50% of Single-family rate)
- **\$4,253.00** per unit; hotel/motel (50% of Single-family rate)
- Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property. The fee chart is located within the section below.

For Plans with Final 1 submitted on or after September 1, 2013 through June 30, 2014 the fee will be applied as follows:

- **\$8,505.00**; single-family detached, semi-detached, duplex or townhouse
- **\$7,655.00** per dwelling unit; multi-family building, i.e. condominium apartments (90% of Single-family rate)
- **\$5,954.00** per unit; hotel/motel (70% of Single-family rate)
- Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property. The fee chart is located below:

Fee Chart for Nonresidential Property

<i>Meter Size (inches)</i>	<i>Maximum Capacity (GPM)</i>	<i>3/4" Meter Equivalent</i>	<i>Fee</i>
3/4 or smaller	30	1.00	\$8,505
1	50	1.67	\$14,203
1 1/2	100	3.33	\$28,322
2	160	5.33	\$45,332
3	320	10.76	\$91,514
4	500	16.67	\$141,778
6	1000	33.33	\$283,475
8	1600	53.33	\$453,572
10	2300	76.67	\$652,078

For FY2015; for Plans Submitted on or after July 1, 2014 through June 30, 2015:

- Hotel/motel will increase to 90% of the single family rate per unit
- Actual rates will be determined based on CPI-U prior to the start of FY2015 and will be published in a separate Memo to Industry prior to the start of FY2015.

The sanitary sewer tap fee increases reflect the requirements of City Code Section 5-6-25.1. This section of the City Code was amended by the Alexandria City Council on May 18, 2013. On July 1 of fiscal years 2015 and beyond, these fees shall be increased by the annual rate of inflation as determined by the CPI-U for the Washington, DC-MD-VA-WVA Combined Statistical Area. For Fiscal Year 2014 an increase of 1.2% was used based on the CPI-U rate from May 2012 to May 2013.

If you have any questions, please contact me or the Site Plan Coordinator, at (703)-746-4064.

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 02-05

DATE: MAY 27, 2005

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY A. BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING
TRANSPORTATION AND ENVIRONMENTAL SERVICES *EWB*

SUBJECT: SANITARY SEWER TAP FEES
CITY CODE SECTION 5-6-25.1

Effective for final site plans and plot plans submitted after April 1, 2005, the sanitary sewer tap fees are hereby increased as outlined in the revised fee schedule below.

- **\$6,684.00**; single-family detached, semi-detached, duplex or townhouse.
- **\$3,342.00** per dwelling unit; multi-family building, i.e. condominiums apartments, hotel/motel.
- Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property. The fee chart is located below:

Fee Chart for Nonresidential Property

<i>Meter Size (inches)</i>	<i>Maximum Capacity (GPM)</i>	<i>3/4" Meter Equivalent</i>	<i>Fee</i>
3/4 or smaller	30	1.00	\$6,684
1	50	1.67	\$11,200
1 1/2	100	3.33	\$22,300
2	160	5.33	\$35,600
3	320	10.76	\$71,900
4	500	16.67	\$111,400
6	1000	33.33	\$222,800
8	1600	53.33	\$356,500
10	2300	76.67	\$512,500

Memorandum to Industry No. 01-05
March 28, 2005
Page 2 of 2

The sanitary sewer tap fee increases reflect the requirements of City Code Section 5-6-25.1. This section of the City Code was amended by the Alexandria City Council on May 2, 2005. On July 1 of each of the fiscal years 2007 and 2008, these fees shall be increased by 3% over the preceding fiscal year. The fees applicable to each fiscal year after 2008 are subject to annual review by the City Council.

If you have any questions, please contact me or Gregory Tate, Site Plan Coordinator, at (703)-838-4318.

City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 03-08

DATE: JUNE 5, 2008

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY A. BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING
TRANSPORTATION AND ENVIRONMENTAL SERVICES *EFB*

SUBJECT: SANITARY SEWER TAP FEES
CITY CODE SECTION 5-6-25.1

Effective for final site plans and grading plans submitted after April 1, 2008, the sanitary sewer tap fees are hereby increased as outlined in the revised fee schedule below.

- **\$7,432.00**; single-family detached, semi-detached, duplex or townhouse.
- **\$3,716.00** per dwelling unit; multi-family building, i.e. condominiums apartments, hotel/motel.
- Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property. The fee chart is located below:

Fee Chart for Nonresidential Property

<i>Meter Size (inches)</i>	<i>Maximum Capacity (GPM)</i>	<i>3/4" Meter Equivalent</i>	<i>Fee</i>
3/4 or smaller	30	1.00	\$7,432
1	50	1.67	\$12,411
1 1/2	100	3.33	\$24,749
2	160	5.33	\$39,613
3	320	10.76	\$79,968
4	500	16.67	\$123,891
6	1000	33.33	\$247,709
8	1600	53.33	\$396,349
10	2300	76.67	\$569,811

The sanitary sewer tap fee increases reflect the requirements of City Code Section 5-6-25.1. This section of the City Code was amended by the Alexandria City Council on May 5, 2008. On July 1 of each of the fiscal years 2010 and 2011, these fees shall be increased by the annual rate of inflation as determined by the CPI-U for the Washington, DC-MD-VA-WVA Combined Statistical Area. Upon completion of the City's sanitary sewer capacity study, a new fee proposal will be developed.

If you have any questions, please contact me or the Site Plan Coordinator, at (703)-838-4318.


City of Alexandria, Virginia

MEMORANDUM

MEMORANDUM TO INDUSTRY NO. 01-07

DATE: JUNE 1, 2007

TO: DEVELOPERS, ARCHITECTS, ENGINEERS & SURVEYORS

FROM: EMILY A. BAKER, P.E., DEPUTY DIRECTOR/ENGINEERING
TRANSPORTATION AND ENVIRONMENTAL SERVICES 

SUBJECT: SANITARY SEWER TAP FEES
CITY CODE SECTION 5-6-25.1

Effective for final site plans and plot plans submitted after July 1, 2007, the sanitary sewer tap fees are hereby increased as outlined in the revised fee schedule below.

- **\$7,091.00**; single-family detached, semi-detached, duplex or townhouse.
- **\$3,546.00** per dwelling unit; multi-family building, i.e. condominiums apartments, hotel/motel.
- Nonresidential property (commercial buildings), fee is calculated based on meter servicing the property. The fee chart is located below:

Fee Chart for Nonresidential Property

<i>Meter Size (inches)</i>	<i>Maximum Capacity (GPM)</i>	<i>3/4" Meter Equivalent</i>	<i>Fee</i>
3/4 or smaller	30	1.00	\$7,091
1	50	1.67	\$11,882
1 1/2	100	3.33	\$23,658
2	160	5.33	\$37,768
3	320	10.76	\$76,279
4	500	16.67	\$118,184
6	1000	33.33	\$236,369
8	1600	53.33	\$378,211
10	2300	76.67	\$543,711

Memorandum to Industry No. 01-07

June 1, 2007

Page 2 of 2

The sanitary sewer tap fee increases reflect the requirements of City Code Section 5-6-25.1. This section of the City Code was amended by the Alexandria City Council on May 2, 2005. On July 1 of each of the fiscal years 2007 and 2008, these fees shall be increased by 3% over the preceding fiscal year. The fees applicable to each fiscal year after 2008 are subject to annual review by the City Council.

If you have any questions, please contact me or the Site Plan Coordinator, at (703)-838-4318.